

ACTES du XI^e Congrès International de Numismatique

*organisé à l'occasion du 150^e anniversaire de la Société Royale de Numismatique de Belgique
Bruxelles, 8-13 septembre 1991*

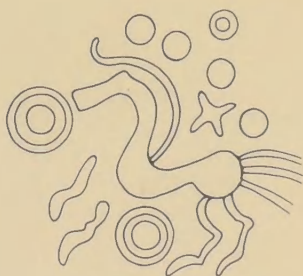
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VOLUME II



édités par le - edited by
Séminaire de Numismatique Marcel Hoc

sous la direction de - under the direction of
Tony HACKENS Ghislaine MOUCHARTE

avec la collaboration de - with the collaboration of
Catherine COURTOIS, Harry DEWIT, Véronique VAN DRIESSCHE

Louvain-la-Neuve, 1993

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VOLUME II

MONNAIES CELTIQUES ET ROMAINES

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List of the papers delivered at the XIth International Numismatic Congress which are not published in this volume.

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M.P. Garcia Bellido, Cronología y función denario ibérico (p. 76)

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PRÉFACE

Les *Actes* du XI^e Congrès International de Numismatique tenu à Bruxelles en septembre 1991 paraissent grâce à un subside de la Commission Internationale de Numismatique et de l'Association Internationale des Numismates Professionnels. La Société royale de Numismatique de Belgique a pris le risque majeur de l'édition et a confié le travail à l'équipe du Séminaire de Numismatique Marcel Hoc de l'Université catholique de Louvain.

De commun accord, ces Institutions ont choisi un format optimisé, permettant d'illustrer abondamment. La composition a été réalisée ou reprise sur ordinateur par le Dr. Catherine Courtois, M. Harry Dewit, et surtout corrigée et uniformisée par Mlle Ghislaine Moucharte, qui a aussi réalisé la maquette et la mise en pages. Mme Véronique Godfrind-Van Driessche, aspirant FNRS, a relu les épreuves avec nous. Mme Linda Arnould-Barbieux, dessinatrice, a aidé à la mise au net de dessins, signes et monogrammes.

L'économie réalisée en amont dans la production a permis de faire confiance à l'imprimeur traditionnel, M. De Meester (Cultura, Wetteren), pour une réalisation de qualité. De plus, l'économie a permis de ne pas réduire les textes ou les illustrations essentielles à leur compréhension.

L'effort ainsi investi exprime notre volonté de donner à un congrès international une suite digne de son succès, de la confiance des collègues du monde entier : au total, nous publions 230 sur 339 communications et posters présentés. La publication constitue un fait majeur du forum de discussions que fut le Congrès. Les tables rondes ont déjà été publiées dans la *Revue belge de Numismatique et de Sigillographie*, 138, 1992, p. LXXV-CIII.

Beaucoup de communications non reprises ici ont vu leur résumé publié dans le livre des résumés ou son supplément. D'autres sont publiés ailleurs. Ceci est signalé dans la mesure où nous en avons connaissance. Dans les volumes des Actes, les textes ont été regroupés en partie de façon à obtenir des quantités équilibrées de pages : notamment les sections de technologie, informatique, bibliographie et statistique ont été redistribuées par époques quand c'était possible et logique.

Cent ans après le premier Congrès International de Numismatique, tenu à Bruxelles en 1891, les Actes sont encore consultés. Nous souhaitons rendre hommage à nos prédécesseurs qui fondèrent la tradition et transmettre le flambeau aux générations futures. Nous leur souhaitons de tout cœur que les numismates belges ne changent pas dans leur générosité d'accueil pour leurs collègues de 2091 et dans leur coopération avec le Comité organisateur, qui a trouvé en 1991 un volontariat enthousiaste sans lequel ni le Congrès, ni les Actes n'étaient possibles.

C'est donc avec une profonde reconnaissance pour ce bilan positif que nous déposons aujourd'hui notre plume au service d'une communauté scientifique internationale et nationale qui nous a comblés.

Ghislaine Moucharte
Secrétaire Général du Congrès

Tony Hackens
Président

pour la Société royale de Numismatique de Belgique
et le Séminaire de Numismatique Marcel Hoc

ABRÉVIATIONS

| | |
|---------------------|--|
| ActaArch | Acta Archaeologica Academiae Scientiarum Hungariae |
| ActaNum | Acta Numismatica |
| AIIN | Annali. Istituto Italiano di Numismatica |
| AJA | American Journal of Archaeology |
| AK | Antike Kunst |
| AMusNapocensis | Acta Musei Napocensis |
| AMusPorol | Acta Musei Porolissensis |
| AntJ | Antiquaries' Journal. Journal of the Society of Antiquaries of London |
| AnnaliSNSPisa | Annali della Scuola Normale Superiore di Pisa |
| ANRW | Aufstieg und Niedergang der Römischen Welt |
| ANSMN | American Numismatic Society. Museum Notes |
| Arch Class | Archeologia Classica |
| ArchEspArq | Archivo Español de Arqueología |
| ArchJ | The Archaeological Journal |
| ASPP | Archivio Storico per le Provincie Parmensi |
| BABesch | Bulletin van de Vereeniging tot bevordering der kennis van antieke beschaving |
| BayerVorgeschbl | Bayerische Vorgeschichtsblätter |
| BCEN | Bulletin du Cercle d'Études numismatiques |
| BCH | Bulletin de Correspondance hellénique |
| BollArte | Bollettino d'Arte |
| BollNum | Bollettino di Numismatica |
| BRealAcad | Boletín de la Real Academia de Historia |
| BSFN | Bulletin de la Société française de Numismatique |
| BSNR | Buletinul Societății Numismatice Române |
| BullCom | Bollettino della Commissione Archeologica Comunale in Roma |
| BullSocNatAntFrance | Bulletin de la Société nationale des Antiquaires de France |
| CahNum | Cahiers numismatiques. Bulletin de la Société d'Études numismatiques et archéologiques |
| CercetNum | Cercetări Numismatice |
| CRAI | Comptes rendus des Séances de l'Académie des Inscriptions et Belles-Lettres |
| Folia Arch | Folia Archeologica. Magyar Nemzeti Múzeum Történeti Múzeumának Évkönyve |
| ForschVolksLand | Forschungen zur Volks- und Landeskunde |
| GacNum | Gaceta Numismatica |
| JBBernHistMus | Jahrbuch des Bernischen Historischen Museums |
| JdAI | Jahrbuch des Deutschen Archäologischen Instituts |
| JHS | Journal of Hellenic Studies |
| JNG | Jahrbuch für Numismatik und Geldgeschichte |
| JRS | Journal of Roman Studies |
| JSav | Journal des Savants |
| KölnJbVorFrühGesch | Kölner Jahrbuch für Vor- und Frühgeschichte |
| LibAnn | Liber Annus |
| LNV | Litterae Numismatica Vindobonenses |
| MAAR | Memoirs of the American Academy in Rome |
| NAC | Quaderni Ticinesi. Numismatica e Antichità Classiche |
| NC | Numismatic Chronicle |
| NCirc | Numismatic Circular |
| NK | Numizmatikai Közlöny |
| NNÅ | Nordisk Numismatik Årsskrift. Scandinavian Numismatic Journal |
| NotScavAnt | Notizie degli Scavi di Antichità |
| NZ | Numismatische Zeitschrift |

| | |
|----------------------|--|
| PPS | Papers of Prehistoric Society |
| ProcRoyal Irish Acad | Proceedings of the Royal Irish Academy |
| ProcSocAntiqScotland | Proceedings of the Society of Antiquaries of Scotland |
| RBN | Revue belge de Numismatique et de Sigillographie |
| RendPontAcc | Rendiconti della Pontificia Accademia Romana di Archeologia |
| RecArchPic | Revue archéologique de Picardie |
| RevArhiv | Revista Arhivelor |
| RIN | Rivista Italiana di Numismatica |
| RM | Römische Mitteilungen |
| RN | Revue numismatique |
| RSN | Revue suisse de Numismatique |
| SCIVA | Studii și Cercetări de Istorie Veche și Arheologie |
| SCN | Studii și Cercetări de Numismatică |
| Sicilia Arch | Sicilia Archaeologica |
| SlovArch | Slovenská Archeológia |
| SlovNumiz | Slovenské Numizmatika |
| WN | Wiadomości Numizmatyczne |
| ZfN | Zeitschrift für Numismatik |
| ZPE | Zeitschrift für Papyrologie und Epigraphik |

MONNAIES CELTIQUES

The Coinage of The British Atrebates : The Sons of Commius

Simon C. BEAN*

The following paper is concerned with the coins of the three leaders of the tribal unit traditionally referred to as the Atrebates and Regni, who by their shared use of abbreviated forms of the patronymic «Commius Filius» styled themselves the «sons of Commius». The distribution of their coins suggest they occupied varying amounts of South East England. Despite the discovery of numerous new types, the arrangement of these coins has altered little since Allens' classic paper¹. Problems with this arrangement began to emerge during a detailed typological and metrological study of the silver coinage of the tribes final Pre Roman leader, Verica. Hoards for this period in this area are few and somewhat unhelpful and distributions are perhaps blurred by what might be termed a «common area of circulation»². The results of this study had important implications for the two leaders who styled themselves his brothers by their shared use of the patronymic «Commius Filius», Tincommius and Eppillus.

The traditional arrangement for the coins of these leaders may be summarised thus. Tincommius is traditionally seen as the successor of Commius, succeeding him in the third decade B.C. The Monumentum Aconinum constructed in A.D. 7 informs us that by the time the inscription had been added a leader called TIN... (the inscription is damaged here) had fled to Augustus as a suppliant. This is usually assumed to be Tincommius. His place was taken by a leader called Eppillus, known to us only from his coins, a discreet group of these coins bearing his name are known largely from Kent suggesting that his kingdom later extended into Kent. At around this time Verica assumed control of the traditional Atrebatian and Regnan lands leaving Eppillus a reduced territory in Kent which he was soon to lose to Cunobelin.

Allen saw Verica's coinage as devisable into three consecutive series and it has become accepted that Verica's coinage was centralised and strictly controlled (e.g. Collis 1971, 75), this mint being placed at Chichester by Nash³. During Verica's reign substantial areas of northern territory were lost to Trinovantian expansion including the oppidum of Calleva. Eventually either due to Trinovantian conquest or internal unrest Verica was forced to Rome around 43 A.D.

The problem of whether Verica, Tincommius and Eppillus were in fact «sons of Commius» is not addressed here. However it is perhaps worth bearing in mind the claimed lineage of Eborac, the Trinovantian/ Catuvellaunian leader who took control of the Northern part of Verica's kingdom. By his shared use of the patronymic «Tasciovanus Filius» he claimed to be the brother of Cunobelin, and it appears that he held his kingdom while his brother, Cunobelin, was both still alive and in power.

We will start by examining selected specimens of Verica's coinage, Van Arsdell 470, 471, 505, in descending order on Allen's scheme. Notice the bold engraving on Van Arsdell 470, the use of crescents, rings, pellets and a star in decorating the field. The large lettering and crescent is shared with the silver unit of Allen's second series, Van Arsdell 505, a series defined by its use of the title REX. However the next two silver units, the first still with the «REX» title, Van Arsdell 506, the other belonging to Allen's

* Department of Archaeology, University of Nottingham, England.
I would gratefully like to acknowledge the grant from the Royal Numismatic Society of Great Britain which enabled me to attend the Congress.

1 D.F. ALLEN, *The Belgic Dynasties of Britain and their Coins*, in *Archaeologia*, 90, 1944, p. 1-46.

2 S.C. BEAN, *Areas of Common Circulation for Iron Age Coins in South East England*, (forthcoming).

3 D. NASH, *Coinage of the Celtic World*, London, 1987, p. 137.

third series Van Arsdell 530, are characterised by a delicacy and classicism of engraving, neater more delicate lettering and an absence of rings, pellets, crescents and stars.

These differences are echoed on the two major gold series. The first, Allen and Haselgrove's series C, Van Arsdell 500, like the first two silver units is characterised by strong bold engraving, large lettering and the use of a crescent and on this series a lituus. By contrast Allen and Haselgrove's series D stater, Van Arsdell 520 (whose reverse is shared by the obverse of Van Arsdell 530), is characterised by the same delicacy and precision of engraving as the unit of Allen's third series and the classical unit of Allen's second series (Van Arsdell 506).

These differences are echoed in the metrology of these stylistically separate groups. The percentage distribution of the stater weights shows the cruder type, Allen and Haselgrove's series C to be of a slightly heavier weight than the more delicate series D (see Fig. 1.1). This metrological difference is also apparent in the distribution of the weights of the silver units, here the cruder coins have a predominantly broader and heavier distribution than the more classical series (see Fig. 1.2).

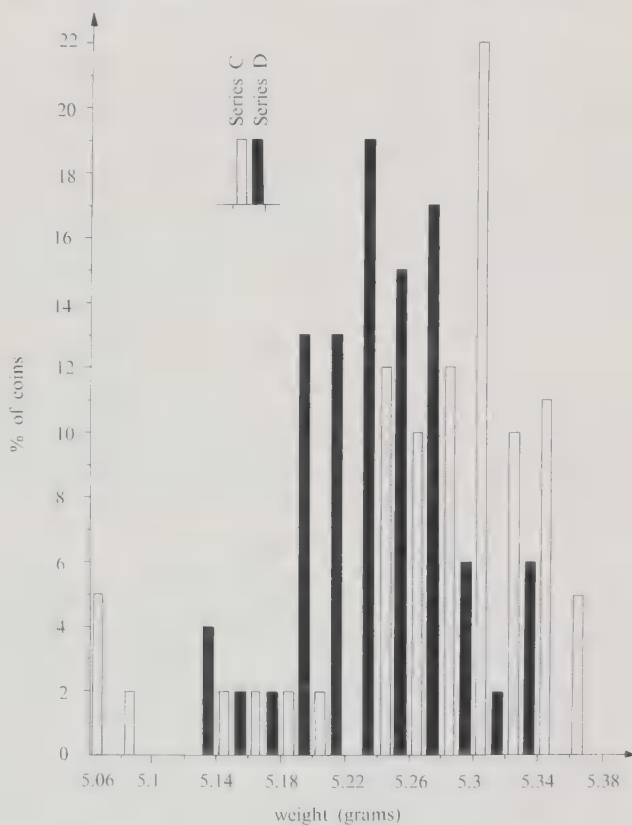


Fig. 1.1. The comparative weights of Verica's two main stater series.

It might be possible to argue that as the heavier coins also bear the less refined designs then the drop in weight and change in style is little more than typological progression, all be it rather sudden. However if one considers the coins of Verica's brothers such a case may be dismissed.

First we shall examine the coins of Eppillus, Verica's supposed predecessor. The star on Eppillus' quarter stater, Van Arsdell 407, is obviously reflected on the Verica's silver unit of Allen's first series, Van Arsdell 470, as is the style of the obverse legend, the reverse rings and pellets which are also shared with Verica's silver unit. The crescent motif on the silver piece Van Arsdell 415 appears somewhat less emphatically on

Verica's first two silver units on Allen's scheme, Van Arsdell 470, 505, the series C stater and on other early coins of Verica such as the quarter stater Van Arsdell 501. Indeed the coins show such similarities in lettering, style and decoration that one must conclude that they are the work of the same mint, which Eppillus' silver unit illustrated here would appear to place at Calleva, Roman Silchester.

To resolve the origin of the more classical coins we must look to the final coins of Tincommius, Eppillus' supposed predecessor. The delicacy and skill with which the designs have been adapted and executed is a world away from the confident though heavy designs on the coins of Eppillus. Metrologically if we compare for example the distributions of the weights of their quarter staters, a difference is apparent (see Fig. 1.3). If one were to accept Eppillus as Tincommius' successor, then it is odd that the successors' coins are so markedly heavier, if one believes that the same mint was used and that coin weights are reduced over time. However if we return to Verica's more classical issues it is immediately apparent that there are features shared with Tincommius's coins.

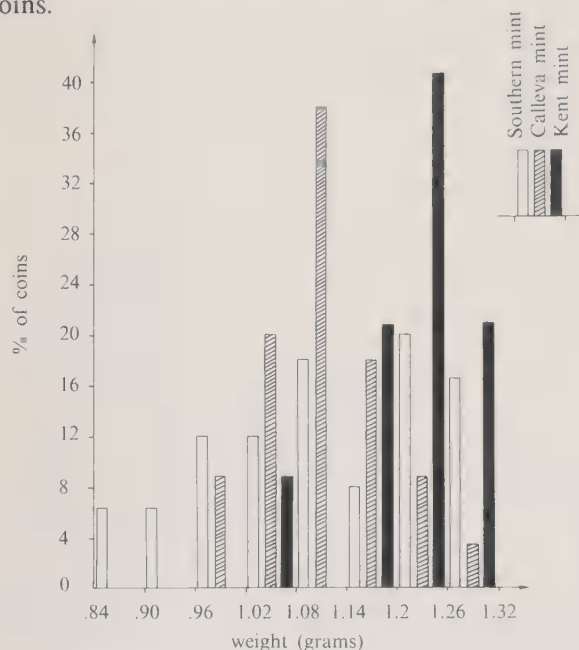


Fig. 1.2. Comparative weights of the three classes of Verica's silver units.

Primarily they share the same classicism of subject and design, the engraving and lettering is delicate and more precise. With the exception of the star device on the stater, pellets, rings and crescents are entirely absent on the final coins of Tincommius (Van Arsdell 375, 378, 397). Lesser features such as the missing bar of the letter «A» are common to the two series.

The C A on the obverse of Tincommius' quarter stater, Van Arsdell 378-1, has been used to suggest that Tincommius minted at Calleva, however several specimens clearly read C B⁴. The interchangeability of the A and B is also evident on the silver unit behind the bust, Van Arsdell 397. Whatever its meaning it would not appear to have been Calleva. As Eppillus occupied Calleva in the north, it would seem reasonable to conclude that the classical coins of Tincommius come from a mint to the south. The coin moulds and other evidence of LPRIA activity found at Winchester and the Chichester/Selsey complex make either of these likely locations. It is therefore apparent that Verica's coinage follows two separate traditions of two separate mints and that he succeeds two

⁴ *Ibidem*, pl. 21, 193.

separate leaders. In addition to these two series stands a series represented by silver units only, which is variously attributed to both Eppillus and Verica.

The first coin, Van Arsdell 442, is known only from a few rather worn specimens, on the reverse is a «victory» figure, the letters E P undoubtedly standing for Eppillus. The obverse legend, correctly read and I believe interpreted by Evans, but subsequently misread as IOVIR, clearly reads on a British Museum specimen, TCVI. It is most likely that VI stands for Verica and that TC stands for Tincommius, who uses this form on an early quarter stater. The second unit, Van Arsdell 443, which is of similar style and subject has lost Tincommius from this partnership although Verica and Eppillus appear very much as equals. On the third coin of this series, and perhaps the final coin, Van Arsdell 532, Verica's name alone appears. While this series shares the classical subjects of Verica's classical coins they lack the small lettering and delicacy of engraving. While the lettering is similar to that of the Calleva mint, the subjects are too classical and rings, pellets and crescents are absent.

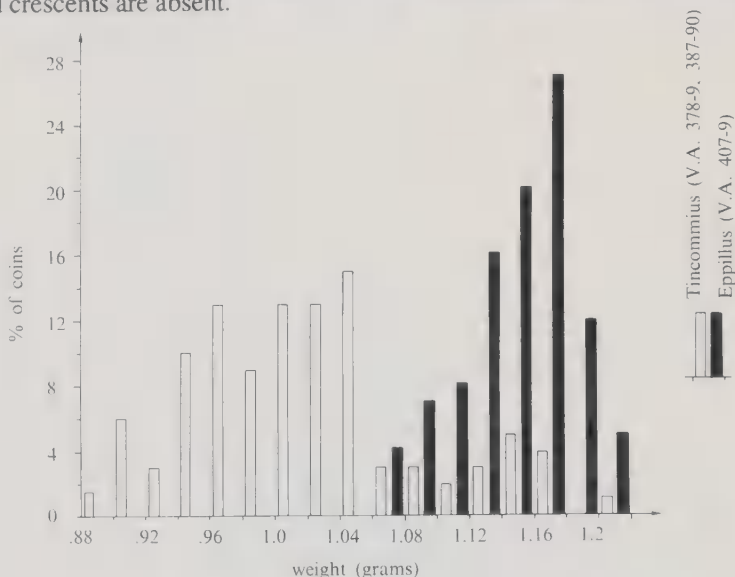


Fig. 1.3. Comparative weights of Tincommius' and Eppillus' quarter staters.

Metrologically this heavy series also stands apart from the other two series (see Fig. 1.2). In its geographical distribution it is largely confined to Kent⁵. Stylistically and metrologically it is in many ways similar to the final coins of Dubnovellaunus' Kentish series. A Kentish origin for this series would therefore seem likely.

From the evidence presented above the following tentative reconstruction is offered. As has been demonstrated, Tincommius and Eppillus were for a least part of their reigns contemporaries. As the earliest types of Eppillus are more advanced than those of Tincommius, it would appear that Eppillus came to power at Calleva after Tincommius had assumed his southern seat. The new prestige bought to Calleva may be reflected in the laying out of a new rectilinear street pattern c. 20 B.C. detected by Fulford⁶. The silver unit of Eppillus reading EPP REX CALLEVA may well have been intended to read «Eppillus, King of Calleva». Eppillus appears to have extended his rule into Kent and later coins which make no mention of Calleva may reflect the fact that he was no longer just «King of Calleva».

⁵ S.C. BEAN, *The Silver Coinage of Verica*, Nottingham, 1990, map 3 (B.A. Dissertation, unpublished).

⁶ M. FULFORD, *Calleva Atrebatum : An Interim Report on the Excavation of the Oppidum 1980-1986*, in *PPS*, 53, 1987, p. 272-274.

Around this time Verica seems to have taken his opportunity, or been appointed governor by Eppillus, and came to power at Calleva. From here he issued a coinage growing from the traditions of Eppillus' coinage at Calleva. Initially it appears that Eppillus, Verica and Tincommius held power in Kent, this alliance appears in the numismatic evidence to have gradually broken down leaving Eppillus' Kentish series and Verica's rare coinage in his own name.

Sometime after the issue in all three's name, and probably during the first decade A.D. Tincommius fled to Rome, Verica assuming his southern seat and mint. The later ejection of Tincommius may go some way to explain why his mint had developed a more classical style than the Calleva mint when Verica assumed its control. The fact that Verica united the two South Thames kingdoms may help explain the Roman perception of the area as that of the Atrebates and Regni.

From the Roman sources used in Verica's Calleva coinage it would appear that he lost his northern seat around 20 A.D.⁷ to Epaticcus who appears to have continued the mint. Under increased pressure from the north or internal rebellion Verica was eventually forced to abandon his southern seat and flee to Claudius in 43 A.D., thus bringing to a close the coinage of the sons of Commius.

⁷ S.C. BEAN, *The Silver Coinage of Verica*, Nottingham, 1990, p. 71 (B.A. Dissertation unpublished).

Coinage, Settlement and Society in the Late Iron Age of East Midland Britain

Jeffrey MAY*

This contribution summarizes aspects of the author's work on the coins of the Corieltauvi, the most northerly people in Celtic Europe to mint coins. The coins were last studied by the late Derek Allen, who published a masterly account of them in 1963. Then, however, only c. 370 were known. Many were from a few large hoards or were unprovenanced, and fewer than 100 were single site finds. Today, largely as a result of finds made by metal detectors, I have record of over 1500 coins. Many new finds came to notice through careful records kept by the late Henry Mossop, with whom I collaborated until his untimely death in 1988. There is now much new information about types, metrology, die-links, metallurgy, minting techniques and ancient forgery. The present paper concentrates on the use of coins from certain or probable settlements, which, together with historical and other archaeological data, allows an integrated approach which throws an entirely new light on the tribe and its political and territorial structure.

Most of the new coins are single finds from settlement sites, and most were probably single casual losses. They are found chiefly on sites in the modern county of Lincolnshire, but also in Nottinghamshire, Leicestershire and Northamptonshire. They spread north of the river Humber in some quantity, although the tribes of the Parisi and Brigantes in northern Britain are generally reckoned not to have minted coins of their own. The distribution of Corieltauvian coins centres on Lindsey, a region of chalk and limestone hills almost entirely surrounded by sea, estuary and marsh, which in medieval times formed an administrative division of the county of Lincolnshire.

Until recently, little has been known about the Corieltauvi. Traditionally they have been regarded as a relatively backward tribe, among a penumbra of tribes on the fringes of more advanced regions of south-eastern Britain. Ptolemy gives us their name, and records that their principal *poleis* were at Lincoln and Leicester. Both places were cities in Roman times, and have remained so to this day, so that opportunities for investigating their origins are limited. Archaeologically, the region has yielded fine pieces of decorated La Tène metalwork¹. Settlements, however, have remained elusive, and only since the 1960s have two major sites been located and subjected to large-scale excavation². Much of the rest of our knowledge of the Corieltauvi comes from coins.

The Corieltauvian coin sequence probably began early in the 1st century B.C. if not before, with gold pieces markedly scyphate in form, and unlike any others in Celtic Europe³. Before the middle of the 1st century B.C., the Corieltauvi were affected by whatever it was that caused nearly all of the tribes of lowland Britain to mint coins derived from the Gaulish staters of Allen's Gallo-Belgic C. Thereafter, coins in gold and in two denominations of silver were minted in a seemingly unbroken sequence down to the Roman conquest of the area c. A.D. 45⁴. Earlier coins were uninscribed, later ones – beginning perhaps c. A.D. 10–20 – were inscribed with a complex series of eight or nine pairs of personal names, probably those of rulers or kings. The conservatism of these coins has often been taken to support the notion of a backward tribe, in a thinly populated

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1 J. MAY, *Prehistoric Lincolnshire (History of Lincolnshire Committee)*, Lincoln, 1976.

2 *Ibidem*; ID., *Dragonby : an Interim Report on Excavations on an Iron Age and Romano-British Site near Scunthorpe, Lincolnshire, 1964-1969*, in *AntJ*, 50, 1970, p. 222-245; M.U. JONES, *Sleaford*, in *East Midland Archaeological Bulletin*, 6, 1970, p. 5-6.

3 J. MAY, *The Earliest Coinages of the Corieltauvi?* (*BAR*, 276) (forthcoming).

4 D.F. ALLEN, *Sylloge of Coins of the British Isles. The Coins of the Coritani*, London, 1963.

region, on the edge of the civilized world. The same evidence of conservatism, however, might support a contrary view, of a people enjoying political or economic stability, in contrast with south-eastern Britain, where rapid changes of coin types reflect interaction with Roman Gaul after 52 B.C., and the rivalries of tribal leaders.

There are now several sites in the Corieltauvian region where coins, supported in some cases by other archaeological evidence, suggest major late La Tène settlements. The sites are shown in fig. 1, with their coins indicated by absolute and percentage figures in broad chronological phases: earliest coins, later uninscribed coins and inscribed coins. Sites yielding La Tène pottery and other material are starred. How many coins are needed from a site for statistical reliability is a difficult matter to judge. Coherent patterns seem to emerge with around 30-40 coins, and in one case fewer.

| | | UNINSCRIBED | | INSCRIBED | | |
|----------------------------------|---------------------------|-------------------|----------------|-------------|------------|----------|
| Numbers of coins | | Scyphate Allen AD | c. 50 BC-AD 10 | c. AD 10-50 | % uninscr. | % inscr. |
| LINDSEY | | | | | | |
| 116 | Ludford | 7 | 98 | 11 | 91 | 9 |
| 40 | South Ferriby (site) | 2 | 32 | 6 | 85 | 15 |
| 66 | "Spilsby" | 5 | 49 | 12 | 82 | 18 |
| 89 | Kirmington # | 7 | 62 | 20 | 78 | 22 |
| 38 | Dragonby # | 2 | 26 | 10 | 74 | 26 |
| 87 | Owmbly | 3 | 59 | 25 | | 29 |
| 41 | Old Winteringham | 6 | 19 | 16 | 61 | 39 |
| 11 | Horncastle # | 0 | 5 | 6 | 45 | 55 |
| SOUTH-EASTERN YORKSHIRE | | | | | | |
| 64 | North Ferriby / Redcliff | 1 | 40 | 23 | 64 | 36 |
| KESTEVEN-LEICESTERSHIRE | | | | | | |
| 18 | Ancaster # | 0 | 14 | 4 | 78 | 22 |
| 25 | Thistleton (incl. temple) | 0 | 18 | 7 | 72 | 28 |
| 7 | Leicester # | 0 | 4 | 3 | 57 | 43 |
| 3 | Old Sleaford # | 1 | 2 | 0 | | |
| 597 total from settlements | | | | | mean | |
| ■ pre-Roman pottery or metalwork | | | | | 71.5 | 28.5 |

Fig. 1. Absolute and percentage numbers of uninscribed and inscribed Corieltauvian coins from major sites in East Midland Britain.

Lindsey produces the greatest number of prolific coin sites, with seven or eight possible settlements. The most extensively excavated site at Dragonby⁵ was clearly a major settlement with a rich material culture. The Iron Age coins from the site are 38 in number, comprising two from the earliest period (both Gallo-Belgic C – derived staters in fairly unworn condition), 26 uninscribed and 10 inscribed coins. The former outnumber the latter by nearly 3 to 1, and since the earlier coins show no more wear than the later ones, we may suppose that they broadly reflect losses in the earlier period.

⁵ J. MAY, *Dragonby: an Interim Report on Excavations on an Iron Age and Romano-British Site near Scunthorpe, Lincolnshire, 1964-1969*, in *AntJ*, 50, 1970, p. 222-245; ID., *Prehistoric Lincolnshire*, (History of Lincolnshire Committee), Lincoln, 1976; S.M. ELSDON and J. MAY, *The Iron Age Pottery from Dragonby*, Nottingham, 1987.

Dragonby's coin statistics could be taken as a standard for comparison with sites elsewhere.

Other sites have seen no more than small-scale excavation, or are at present known only from surface finds in ploughed fields. Kirmington was a larger settlement than Dragonby, judging by its surface spread of artifacts. Limited excavation suggests occupation, like Dragonby, from at least the 1st century B.C. The coins show the same depositional pattern as Dragonby: coins of the early-mid 1st century B.C. are followed by a larger number of later uninscribed coins and a smaller number of inscribed issues. Again, the ratio of uninscribed to inscribed coins is about 3 to 1.

Ancaster, in Kesteven, shows exactly the same ratio, even though there are so far only 18 coins recorded. Here again, excavation, albeit on a small scale, showed occupation beginning at least as early as the 1st century B.C.⁶

This is not the place to give details of the evidence for La Tène settlements at each of the sites. Suffice it to say that Ludford, South Ferriby, Spilsby and Owmbly in Lindsey all show similar depositional patterns, with, in some cases, even higher percentages of uninscribed coins. Only at Old Winteringham and Horncastle do the ratios of inscribed coins begin to increase considerably, reflecting perhaps heightened activity at the end of the Iron Age, and, at least at the former, the proximity of a Roman fort. But even here, the early uninscribed coins appear in sufficient number to suggest occupation in the 1st century B.C.

Beyond Lindsey to the north, in the territory of the Parisi, a site at Redcliff has produced a substantial number of Corieltavian coins. There are also many Corieltavian coins from parishes nearby. It has hitherto been assumed that a few coins crossed the river Humber by way of trade. But in quantity and in depositional pattern, the Redcliff coins match those from sites in Lindsey, and likewise suggest a major Iron Age settlement at least as early as the 1st century B.C. It is even possible that this district of the Parisi was part of the normal circulation area of Corieltavian coins, or was possibly ruled from south of the Humber.

Farther south, the situation is more difficult to interpret. Not far from Ancaster, a site at Old Sleaford yielded over 3,000 fragments of mould trays, commonly associated with Iron Age minting. The moulds were, incidentally, of three sizes, inviting comparison with the three Corieltavian denominations⁷. Excavation, too, yielded rich late Iron Age occupation, although perhaps starting later than the Lindsey settlements. Old Sleaford is now largely under modern houses, however, and few coins have consequently been found. We can learn correspondingly little about the settlement from numismatics.

Farther south again, Thistleton could have been a major Iron Age settlement, judging from the spread of coins across a number of arable fields. The excavation of part of the site, however, failed to find occupation much earlier than Romano-British. Many of the Thistleton coins were apparently associated with a wooden building beneath a Romano-British temple, which may have been an Iron Age shrine. If so, the Thistleton total perhaps should not be compared yet with the others, since deposition of a significant number may have been determined by different criteria.

Finally, at Leicester, the Roman cantonal capital of the Corieltavi, excavation has recently yielded pre-conquest pottery, mould trays, and a few coins. But, like the other Corieltavian *poleis* at Lincoln, the site is beneath a modern city, and the Iron Age coin list to date is limited.

⁶ J. MAY, *Prehistoric Lincolnshire* (History of Lincolnshire Committee), Lincoln, 1976.

⁷ *Ibidem*, fig. 88.

The sites under discussion form a coherent spatial pattern, particularly in Lindsey and Kesteven. Allowing for certain distorting geographical factors, they lie at remarkably regular intervals of around 20-30 km (Fig. 2), and it would be surprising if this spacing were mere coincidence. With the addition of the physical features of the region, it is perhaps possible to reconstruct the political geography of the tribe. The Corieltavian heartland was evidently Lindsey, and there especially, but also farther south, we can perhaps postulate sub-tribal districts of broadly comparable extent. The settlements are all located near or on the higher ground, and it was perhaps grazing land that gave each district, and the tribe in general, one of its chief sources of wealth.

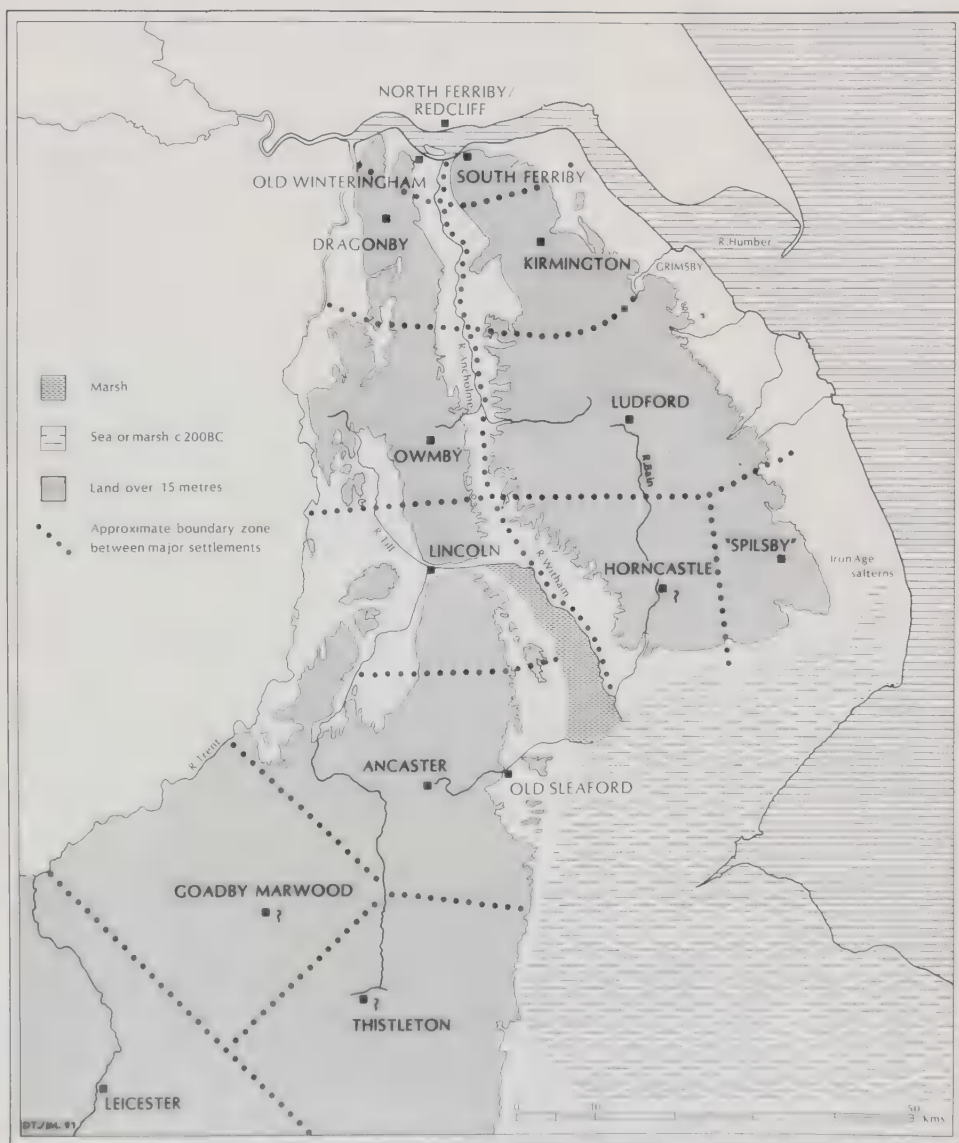


Fig. 2. Probable major settlements of the Corieltavi and their possible hinterlands.

The implications are that far from being backward, the Corieltavi were a well-organized, stable and moderately wealthy state, with settlements developing along urban lines as early as any in Britain. It was probably factors such as these that attracted the Romans to their land, and led to their apparently rapid subjugation.

Archaeological Evidence for the Dating of Iron Age Potin Coinage : the Case of Scheers 191

Colin HASELGROVE*

The dating of Iron Age cast bronze coinage – commonly known as potin – in western Europe is still controversial. Despite its typological dependence on the second century B.C. bronze coinage of Marseille, many numismatists argue that Continental potin coinage originated only in the new conditions created by the Roman conquest of Gaul between 57-51 B.C. This hypothesis seeks support in the comparative scarcity of potins in the Camp D ditch deposits at Grésigny-Ste-Reine, dating to 52 B.C., where potins account for only 12% of the Iron Age coins and a mere 8% of the types in the find. In contrast, potins are abundant finds on sites of the later first century B.C. and the early Empire, both in eastern and central Gaul, and in Belgic Gaul. Ultimately this late dating rests on the low intrinsic value of potin and the numismatists' belief that Iron Age societies and their economies were insufficiently developed before the Roman conquest for them to have used a token coinage.

In recent years, this view has been maintained despite several hoard and burial finds, and increasingly from settlements, which imply that potin was being produced or used well before the Roman conquest in several areas of Gaul, probably before 100 B.C. and certainly by the early first century B.C. Although the probity of individual hoards such as Houssen or Lattes can be questioned (Colbert de Beaulieu, 1973), the archaeological evidence is too consistent to be dismissed in its entirety. Two series with a particularly good claim to an early origin are the «horned horse» potins attributed to the Sequani (LT 5368 etc) and the Leuci «boar» type (Scheers 186). These types occur in several La Tène D1 burials : in Grave 49 at San Bernardo, Ornavasso, in northern Italy (Graue, 1974), which contains both types; at Uffhofen and Wederath (Grave 90), both in Germany; and at Saint-Sulpice in Switzerland (Polenz, 1982). The first three graves all belong to the La Tène D1b horizon (defined by the currency of the bronze Nauheim brooch) which Miron (1986) dates to c. 100-60 B.C. Both types are among the potins recovered from the Grésigny-Ste-Reine ditches, but a more significant *terminus ante quem* may be provided by the two «horned horse» coins and other local potins found among the main offerings at La Tène itself, where deposition had probably ceased by c. 70-65 B.C. (Allen, 1973).

The most conclusive evidence of early date, however, is provided by settlement finds. Unlike burials and hoards, which represent a single moment in time and could conceivably fall right at the end of the dated archaeological period to which they belong, most settlement deposits reflect longer timespans. It should thus be evident whether coin losses occurred throughout a particular phase of occupation, or at least during most of it. Thus at Basel-Gasfabrik, Furger-Gunti (1982) dates the first potins to the early first century B.C. since the coins (which include both Sequani and Leuci types) are associated with La Tène D1 material throughout the occupation, including Nauheim and filiform brooches and Dressel 1A amphorae. The site has produced nothing later than this horizon and its assemblage only just overlaps with the Basel-Münsterhügel settlement. An even earlier dating is proposed for another settlement in the region with comparable potin finds, at Breisach-Hochstetten (Storck, 1984). Although outside their primary circulation area, potins account for 25% of the excavated coins from the well-known *oppidum* of Manching in Bavaria, 10 of them (including Leuci, Sequani and Helvetii (LT 9361) types) coming from contexts with La Tène D1 material including several Nauheim brooches and one from an apparent La Tène C2 context (Kellner, 1990). Manching itself was abandoned by c. 65-60 B.C. on the most recent dating, which adds further force to

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the argument (cfr Overbeck, 1987). The important new La Tène D1 site at Pollanten, 45 km north of Manching also yielded Leuci potins (Kellner, 1990).

Unless the current archaeological dating of La Tène D1 is too early by a generation – which seems highly improbable given the support obtained from dendrochronology – we must conclude that in eastern Gaul at least, potin coinages had achieved widespread circulation and undergone substantial typological modification before the Gallic War. Site finds also offer a means of dating potin in other areas of Gaul where burial evidence is lacking or unhelpful. First, however, the problems of dating coins from individual archaeological contexts must be mentioned. Perhaps the most obvious is the lack of independent absolute dating evidence for most deposits, particularly on sites without classic vertical stratigraphy; the dating often rests on the associated material and can too easily become circular. Another difficulty is residuality. Few coins, apart perhaps from some offerings on religious sites, are found at their original point of deposition and most settlement finds are probably secondary (i.e. disturbed or redeposited in later contexts, sometimes very much later). The result is a cumulative tendency to a dating later than the period of a coin type's maximum circulation, which in turn lags behind its production span (Haselgrove, 1987, p. 38-39).

One approach which minimises these difficulties, but has yet to be directed at the controversy over Gaulish potin chronology is to build up a quantified corpus of the archaeological contexts in which a particular coin type occurs, and of its associations with other chronologically diagnostic artefacts, such as brooches (Haselgrove, 1987, p. 71-73, 94-101). Provided the sample of stratified finds is both large enough and comes from a sufficiently wide range of sites to be representative of the overall pattern, such information affords a much better basis for inferring when the main period of circulation of that coinage begins and ends. Quantifying the evidence means that individual errors, such as an intrusive coin or incorrect dating of a particular context, should not matter too much, providing that the majority of contexts are sound. It is the overall picture which is important. We can also compare the associations and stratigraphic profiles of several different coin types to establish their relative order. With those Iron Age coinages which cannot be dated by any other means, comparing their profiles with those of better dated types may well offer the best solution to building up an absolute chronology.

This approach has recently been applied with some success to the dating of British potin coinage (Haselgrove, 1988). In all, the series is now known from 113 separate archaeological finds at 72 different sites. The results confirm Allen's (1971) typological ordering of the main British potin series, with its characteristic flat linear style, and bear out his early dating for its inception, no later than the very early first century B.C. Moreover, since this represents the second stage of potin coinage in Britain, succeeding the copies of the Massaliote originals which still have the letters MA above the butting bull (cfr LT 5284) and their closest derivatives, this implies that potin was first used in south-east England as early as the late second century B.C. The main British potin series are with little doubt the objects to which Julius Caesar's famous mention of *aere* in Britain, alongside *nummo aureo*, refers (DBG, V, 12). The evidence points to their role as some kind of special purpose money; initially sufficiently valuable to hoard in large quantities, they later feature increasingly in long-distance relations between the most important settlements. Ironically, it seems that in Britain, it was the advent of a more commercial economy employing struck bronze coinage during the later first century B.C. which brought potin production to an end, although the coins themselves continued to be used for a long time afterwards.

Archaeology and the dating of Scheers 191

I shall use a similar approach here to examine the dating of the well-known Belgic potin type, Scheers 191 (BN 8124-32), which is potentially among the earliest cast coinages in the region. This has a widespread distribution across Belgic Gaul from the lower Seine to the middle Rhine (Fig. 1), although its home is clearly in northern France



Fig. 1. Distribution of potin Scheers 191, showing the principal stratified finds.

and the type is generally attributed to the Remi. Some numismatists see the quadruped on the reverse as an elephant imitating the denarius of Julius Caesar (Crawford 443/1, 49-48 B.C.), thus dating the series after the Gallic War. However, this derivation is not especially convincing, much less so than for another Belgic type, Scheers 195¹. The animal could just as easily be a bear or some other wild beast and some varieties show a recognisable equid (e.g. Chossenot, 1987, Fig. 2; cfr Scheers 201). A feature which may be more significant for dating is the symbol above the animal, which could be a brooch. If so, this looks back to earlier types and has nothing in common with late Iron Age varieties, such as the La Tène D2 collared brooch clearly depicted on the gold coins of CRICIRV. The obverse of S 191 showing a person with plaited hair carrying a torc and a lance is purely indigenous in inspiration and marks a deliberate departure from the head types of the Massalia-based potin tradition further to the east and south.

So far, I have listed 70 contexts with S 191 potins from 39 separate archaeological sites. Undoubtedly further instances will come to light, as the type is known from at least 57 other definite sites and 11 probable ones. Not all the stratified potins provide usable information, but a profile for the series can be built up from the 53 contexts which can be dated reasonably closely (Fig. 2). Two main points emerge. First, although absent from the Grésigny-Ste-Reine ditch deposit, S 191 occurs frequently in contexts which would normally be dated before 60 B.C. from the other archaeological material which they contain. Secondly, the datable artefact associations of S 191 are predominantly with La Tène D1b material: brooches of middle La Tène form and above all Nauheim and

¹ The obverse of Scheers 195 is probably inspired by a Roman *sestertius* (Crawford 445/4, 47 BC).

As already indicated, the archaeological dating of La Tène D1 itself seems not to be a problem, with widespread agreement that this horizon predates the 50s B.C. (e.g. Miron, 1986; Vaginay and Guichard, 1990). However, a further check is possible by comparing the stratification and associations of S 191 with those of some better dated struck coinages. The types which have been selected here are :

1. the «Running Man» bronzes attributed to the Veliocasses (S 163), a type which is present in the Grésigny-Ste-Reine ditches;

2. the «Janiform Head» bronzes attributed to the Suessiones (S 154); and

3. those inscribed CRICIRV (S 27), which together comprise the majority of finds from the Pommiers (Aisne) *oppidum*; both series are generally dated to the Gallic War, although I would date the CRICIRV bronzes immediately afterwards;

4. two types with the legend A HIRTIVS, who was proconsul of Gaul in 45 B.C. (S 153, S 162); these bronzes are certainly post-war and S 162 is given a *terminus ante quem* by coins of the same type bearing the name CARINAS, *propraetor* in 31 B.C.; and finally

5. the brass coins inscribed GERMANVS INDVTILLI L (S 216). Their exact dating is disputed, but they are fairly certainly Augustan with a *terminus ante quem* of 8 B.C. from their presence at the Oberaden legionary fortress. The most likely prototype is the orichalcum *quadrans* of Augustus with a butting bull reverse, issued at Lyon from c. 15 B.C. (RIC² *Augustus*, 228), but there are other possible models, although the positioning of the legend and the adoption of brass are both highly suggestive. In compiling the archaeological contexts for these types, I have relied heavily on the important publication of Brunaux and Gruel (1987) supplemented by a quick search of published coins from other sites, e.g. the Titelberg, Luxembourg (Weiller, 1977). Using many of the sites which have also produced S191 potins has its advantages, since it reduces the likelihood of any differences being due to functional and chronological contrasts between the actual sites.

The stratification pattern of these other series gives strong support to the early dating of S 191 (Fig. 3)³. The only struck bronze type found in contexts pre-dating 60 B.C. is S 163; at Epiais-Rhus (Val d'Oise; Lardy, 1987), and Gournay-sur-Aronde, although Brunaux (1987) regards the two coins from the *fossé à exposition* at the latter site as intrusions. S 163, however, is most common in La Tène D2 contexts, as is S 154. Both the CRICIRV and the A HIRTIVS bronzes also make their first appearance at this horizon, but occur as frequently in Augustan contexts. This is just as one would expect if S 162 was indeed produced in the 40's B.C. and perhaps even during the 30's. Lastly, S 216 features in Augustan and Tiberio-Claudian deposits, displaying a markedly later stratigraphic profile than any of the other types. The picture with the brooch associations is similar. Both uninscribed series (S 163 and S 154) are most often found with La Tène D1 brooches, but are also frequently associated with La Tène D2 brooches – far more so than is the case with S 191 potins. The inscribed coins (S 27 and S 153, S 162), however, are usually associated with La Tène D2 and even Augustan types, while S 216 almost always occurs with brooches which became common under Augustus, such as the Aucissa and Simple Gaulish types. Apart from S 216, the amphora associations of all these series are predominantly with the Dressel 1B variety.

These results are significant in their own right for the accepted dating of some of the coins, although the small size and random nature of the samples must again be stressed. Firstly, the stratification of the «Running Man» series (S 163) suggests that, contrary to the belief of many authorities, striking of bronze coinage started in Belgic Gaul within La Tène D1, i.e. before the Gallic War. The type is certainly an early one, as the Class II coin which was found at Grésigny-Ste-Reine is one of the typologically later varieties (Scheers, 1977). However, its starting date is evidently significantly later than S 191, which should push potin production back still further within La Tène D1. The «Janiform Head» type (S 154) is clearly later, but should still date to the very beginning of La Tène D2, i.e. to the late 60's or 50's B.C. Significantly, most of the filiform brooches with

³ The graphs in Fig. 3 are expressed in percentages to aid comparison of the different types. For clarity, I have also omitted coins residual in second century AD and later contexts.

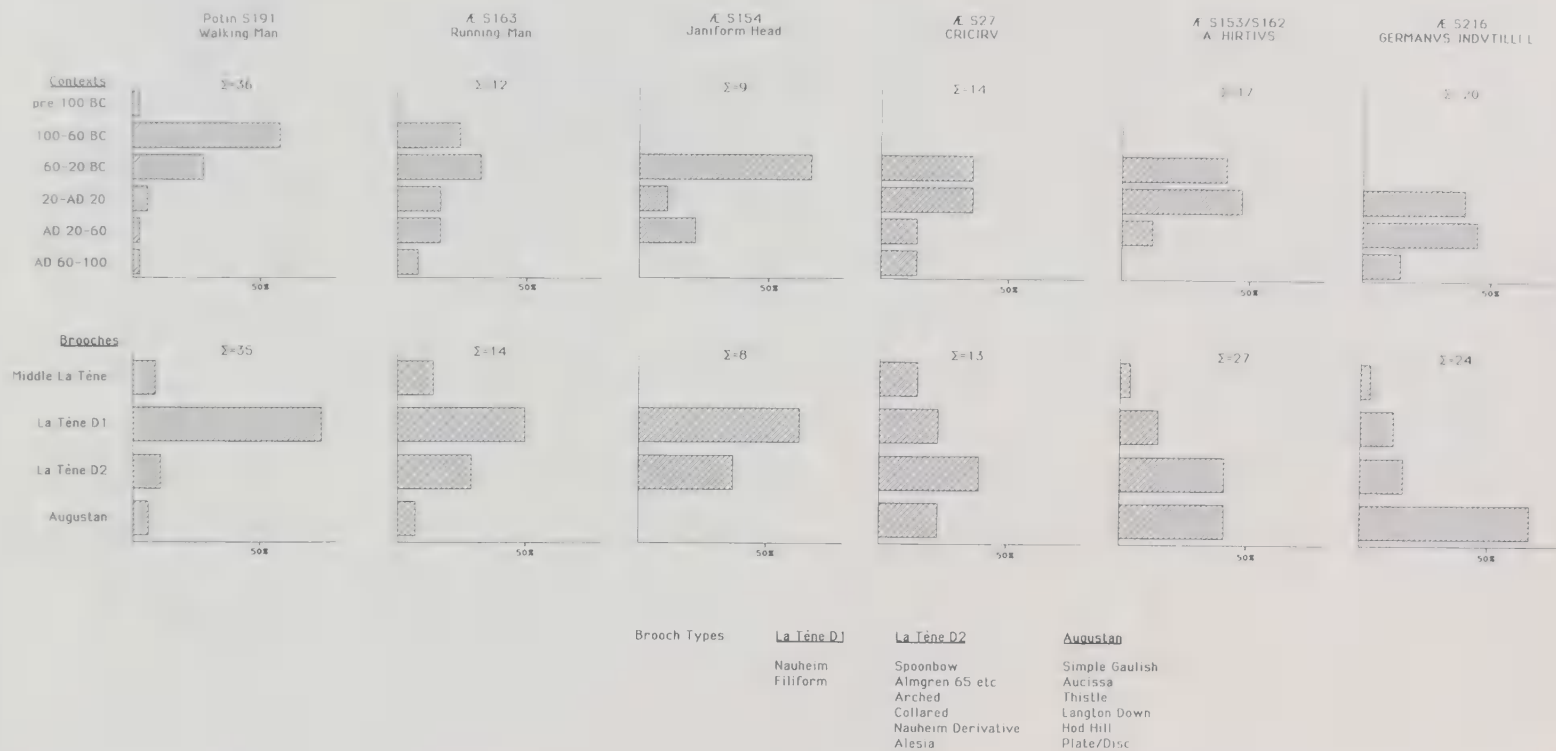


Fig. 3. Stratification and associations of various Belgic struck bronze types compared to those of Scheers 191.

which this type is associated (although included with the La Tène D1 brooches on Fig. 3) are actually the later form with a pronounced curve, as at Villeneuve-St-Germain (Debord, 1987), whereas S 163, like S 191, occurs mainly with the earlier version with a fairly flat arc.

Secondly, the stratigraphic profile of the CRICIRV bronzes is so similar to those inscribed A HIRTIVS as to suggest that they too are a largely post-war coinage. CRICIRV could well be a Gaulish rendering of the Roman name Cicero; M. Tullius' brother served as one of Caesar's legates in Belgic Gaul between 54-52 B.C. and his name would have been a good compromising choice for a collaborating Gaul (Allen, 1980, p. 81). This in turn has implications for the conventional numismatic dating of Pommiers and accords with the accumulating archaeological evidence of intensive occupation in the interior of the *oppidum* in the later first century B.C. (e.g. Brun and Robert, 1988). Thirdly, although the early Augustan dating of S 216 seems assured, three anomalous excavated finds should be noted. At the Titelbiert, two specimens were recovered separately in contexts pre-dating 30 B.C. but are deemed intrusive (Weiller, 1977); and at Basel-Münsterhügel, a third coin was found in *Schicht C oben* which is dated c. 20-12 B.C. (Furger-Gunti, 1979).

Discussion and conclusions

The archaeological evidence points unmistakably to pre-Conquest manufacture and circulation of potin coinages in Belgic Gaul. For S 191, a date soon after 100 B.C. – at the latest – seems assured. This type is associated above all with La Tène D1b material and occurs freely in contexts belonging to this horizon at different sites from Picardy to the Swiss frontier. While no S 191 potins have as yet been excavated in secure contexts pre-dating this horizon, a still earlier starting date, in the later second century B.C., remains highly probable, for three reasons. First of all, S 191 significantly pre-dates the struck bronze coinage S 163, which itself belongs to the latter stages of La Tène D1b (c. 80-60 B.C.). Secondly, there is invariably some time lag between when a coinage goes into circulation and when it becomes common in archaeological contexts, given that these are mostly secondary deposits such as pit and ditch fills rather than the primary point of loss. Thirdly, the British potin series which unfolds in parallel with the Continental from a point relatively early in the total sequence, itself has origins in the second century B.C. (Haselgrove, 1988), a time when south-east England was in close contact with the Continent and importing Belgic gold coinage in considerable quantities from the Picardy region in particular.

The dating of individual archaeological contexts is inevitably a subjective procedure and some errors will occur. The strength of the approach presented here is that it emphasises the overall picture and enables us to establish the relative ordering of types by comparing their particular stratigraphic profiles and association patterns. What is urgently needed now is that the study of other Belgic potin series is placed on a similar footing. When this is done, it is not unlikely that other regional types beside S 191 and the Leuci boar coins (Scheers 186) will be shown to have equally early origins. Two immediate contenders are the Treveran types, Scheers 199 and 200, both of which occur in early stratified contexts at the Titelbiert, which in the case of Scheers 200 may go back into the second century B.C. (Rowlett *et al.*, 1982).

Despite the apparent proliferation of potin in Belgic Gaul at time of the Conquest, it is possible that continuing *use* of potin – rather than continuing manufacture – is confusing the chronology (as in Britain). An alternative model is to see struck bronze coinage gaining ascendancy soon after the Gallic War and to attribute the frequent occurrence of potin in later first century B.C. and in Augustan contexts to its function having changed significantly by this period. Function, not chronology, could equally explain the relative scarcity of potins in the Grésigny-Ste-Reine ditches; if we assume Gaulish soldiers and auxiliaries were paid in silver and also used struck bronze in camp, such coinage might well be expected to predominate at Alésia, as in fact happens.

Gruel (1989, p. 151-152) has recently made a number of interesting suggestions about the functions which potins may have had other than as a means of exchange. Based on analogies with ancient and medieval tokens, these include their use as reckoning counters or attendance money; or as «*méreaux*», «*jetons de libéralité*» or «*bons de franchise*». As one way of approaching the problem, I shall therefore conclude with a brief survey of the kinds of site where S 191 potins have been found. There are 87 sites whose nature is reasonably certain, of which 16 are late or more often post-Roman cemeteries (18%). 36 are either *oppida* or other major nucleated or fortified settlements, by far the largest category (41%). By contrast, rural settlements comprise a mere 5% and these are nearly all sites such as Beaurieux or St Maximin right at the core of the distribution. Religious sites form the other significant category, 23 sites in all (26%), ranging from major sanctuary complexes (Orrouy) and cult sites (La Tène) to isolated *fana* (Chilly). To these can be added another three suspected religious sites as well as several river finds which are probably offerings. A few coins are recorded from Roman fortresses or their attendant *canabae* (6%).

Such dating evidence as we have suggests that, in the early stages, potins were mainly being used and lost in quantity at the major settlements; they also featured in long-distance relations between important centres, as the finds at sites such as Basel-Gasfabrik and above all Manching demonstrate. In this context, we should not overlook the attested clientship relations which paramount groups like the Aedui, the Remi and the Sequani had with the lesser peoples (*DBG*, VI, 12); indeed, the expansion of the potin tradition to Belgic Gaul and to south-east England may owe much to such contacts. At this period, potins only occasionally served as ritual offerings at sacred sites, but after the Conquest this changes rapidly and monetary offerings become common at religious sites everywhere. At least some of the later settlement finds are also from contexts which suggest a ritual dimension, as for example the mass of coins and brooches from the ditch crossing at Villeneuve-St-Germain (Debord, 1987), but most of the larger sites lack sufficiently detailed information to be sure of the conditions in which coin losses occurred.

From this admittedly rapid survey, I shall conclude by suggesting that the advent of the new inscribed coinages of the mid first century B.C. caused fairly rapid cessation of potin production. Increasingly redundant in their original special purpose role, the extant coins came to be used more and more as offerings, perhaps even acquiring an overt religious significance which they never had previously. Possibly this happened because the traditional immobilized potin types were immune to the changing political conditions and values of post-Conquest Gaulish society in a way that inscribed coins – with their high propaganda content – were not. In any case, their metal content hardly rendered them worth recalling. This new religious emphasis, together with some continued use of potin at the main settlements, but now in a secondary role to bronze, would go far towards explaining the apparent proliferation of potin finds in post-Conquest contexts, which has so confused the question of their origins and dating. Such usage presumably continued for a few decades until Romanization and the rapid penetration of the Roman monetary system under Augustus rendered indigenous coinage of any sort irrelevant and potins ceased to be used altogether. Even so, the religious and cultural significance of particular potin types probably ensured that many owners retained their coins as amulets or charms, which might explain, why several centuries later, so many potins came to be reused among the furnishings of Merovingian graves. However, unlike their chronology – which we should eventually be able to establish with some precision – their function in Iron Age society and how this was altered by the Conquest is something we will never be able to reconstruct other than in general terms.

Acknowledgements

I should like to thank Jean Debord and Patrick Pion for providing additional information about their respective excavations at Villeneuve-St-Germain and Condé-sur-Suippe.

Appendix 1 : Scheers 191 potins from dated contexts

pre-100 B.C. ?? *Marienborn* (Germany) : La Tène C2 cremation ?? (Polenz, 1982, No. 11)

La Tène D1b (c. 100-60 B.C.) *Basel-Gasfabrik* (Switzerland) : Grube 176; Grube 217 (Furger-Gunti and Berger, 1980). *Beaurieux, Les Grèves* (Aisne) : Str. 3015, couche 3011. Possibly later (Author, unpublished). *Chilly* (Somme) : Fosse 58 (Collart, 1987). *Condé-sur-Suippe* (Aisne) : Str. 5 (Constantin and Ilett-Fleury, 1982); Structures 94, 102, 204, 213, 224, 238, 306, 310, 355, 358, 375, 385, 401 (Pion, 1990). *Gournay-sur-Aronde, Le Parc* (Oise) : Fosse A. Possibly later (Brunaux, 1987). *La Cheppe, Camp de Mourmelon* (Marne) : Fosse 37 (Chossenot, 1987). *St Maximin, Les Cerisiers* (Oise) : enclosure ditch (*Gallia* 43, 478).

La Tène D2 (c. 60-20 B.C.) *Béthisy-St-Martin, Barillet* (Oise) : Fond de cabane, carrés B5 and B7 (Jouvé, 1973). *Champlieu, Orrouy* (Oise) : Niveau 7a (Huysecom and Woimant, 1983). *Chilly* (Somme) : Fossé 1, couche 3 (Collart, 1987). *Epiais-Rhus, Les Terres Noires* (Val d'Oise) : Str. d'habitat No 17, fosse 2 couche 1 (Lardy, 1987). Possibly earlier ? *Missy-sur-Aisne, Les Gardots* (Aisne) : Fossé 125 couche supérieure (Haselgrove and Pion, forthcoming). *Nampcel, Moulin-Touvent* (Oise) : Tumulus burial (Scheers, 1977, No 72). *Titelbiert* (Luxembourg) : Schicht a des Strassengraves (Weiller, 1977). *Villeneuve-au-Châtelot, Les Grèves* (Aube) : outer ditch, dépôt A4-5 (Piette, 1987). *Villeneuve-St-Germain* (Aisne) : Fossé F2 middle fill; Fossé F4 uppermost fill (Debord, 1987).

Augustan (c. 20 B.C.-A.D. 20) *Champlieu, Orrouy* (Oise) : Niveau 7b (Huysecom and Woimant, 1983). *Flavier à Mouzon* (Ardennes) : Niveau III ? (Tisserand, 1981).

c. A.D. 20-100 *Chilly* (Somme) : Fosse SO/Terre arable (Collart, 1987). *Digeon* (Somme) : east of chalk foundation 23 (Delplace, 1987).

Gallo-Roman C2-C4 A.D. (Scheers, 1977, unless otherwise indicated). *Arcy St Restitute* (Aisne) : Burial 692. Possibly later. *Baalon, Stenary* (Meuse) : «remblais des substructions» with Roman coins. *Cierges* (Aisne) : Burial 2048. *Génainville, Vaux de la Celle* (Val d'Oise) : «petite aire dallée». *Nizy-le-Comte, La Justice* (Aisne) : «Parmi les antiquités Gallo-Romaines». *Titelbiert* (Luxembourg) : Keller 4, Keller 6 (Weiller, 1977).

Merovingian (Scheers, 1977). *Andernach, Kirchberg* (Germany) : Frankish tomb. *Arcy-St-Restitute* (Aisne) : Burial 178. *Armentières-sur-Ourcq* (Aisne) : Burial, 6 Nov 1884. *Brény* (Aisne) : Burial, 16 July 1880. *Bury*, derrière l'église (Oise) : in the Frankish cemetery. *Chaumuzy* (Marne) : female grave (or Gallo-Roman). *Oyes* (Marne) : Frankish cemetery. *Villers-Agron-Aiguizy* (Aisne) : warrior burial 143. *Worms*, environs (Germany) : Frankish tomb. *Worrstadt* «La Parisier Strasse» (Germany) : Frankish tomb.

Uncertain date (Scheers, 1977 unless otherwise indicated) *Camp de Vernonnet, Montagne* (Eure) : Gallo-Roman villa building. *Condé-sur-Suippe* (Aisne) : 1966 pit; 1979-80 pits etc (*Gallia*, 37, 305). Probably La Tène D1b. *Ehl* (Bas Rhin) : dans les tombes près de Heidelberg. Gallo-Roman or Merovingian. *Fère-en-Tardenois* (Aisne) : Sép. 629. Gallo-Roman or Merovingian. *Guiry-en-Vexin* (Val d'Oise) : Fosse H (disturbed layer). Merovingian or later. *La Cheppe* (Marne) : Two or more pits. La Tène D1/D2 (Chossenot, 1987). *Ribemont, St Quentin* (Aisne) : dans un cimetière Franc. *St Thomas, Vieux Laon* (Aisne) : Transversal rampart, coupe F1; stone rubble surface in entrance, Site F11. Both probably La Tène D (Lobjois, 1966). *Varney, Côte de Venise* (Meuse) : against the Roman road. *Villers-Agron-Aiguizy* (Aisne) : Burials 68, 106. Gallo-Roman or Merovingian.

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L'Anjou et le type à la tête cornue couronnée d'un hippocampe (type BN 6830)

Christian FRÉBUTTE*

I. Avant-propos

L'étude des monnayages d'or celtiques de la partie occidentale de la France soulève encore de nombreuses interrogations; ainsi en est-il de l'examen des numéraires d'or frappés en Bretagne et dans les départements limitrophes ou relativement proches.

L'exemple que nous avons choisi témoigne de quelques aspects de cette problématique et des difficultés de partager des opinions devenues traditionnelles. En effet, la série à la tête cornue couronnée d'un hippocampe n'a jamais suscité de travaux particuliers, même si certains de ses composants furent octroyés tantôt aux Aulerques Cénomans¹, tantôt aux Vénètes (dont ils constitueraient les variétés G et H²). Notons que cette dernière attribution prévaut dans la plupart des médailliers publics.

II. Classement

CLASSE I

VARIÉTÉ A

Les statères (type BN 6830) (Fig. 1)

Au droit, une tête humaine présente son profil droit. Sa chevelure peut être décomposée de la manière suivante : tout d'abord, une vague supérieure constituée de deux mèches, en forme d'esses, s'appuyant l'une contre l'autre au-dessus de l'os frontal; la mèche de droite se poursuit hors de la masse capillaire tandis que la mèche de gauche s'y enfonce pour recouvrir l'os temporal; une troisième mèche, disposée en retrait, prolonge la composition vers la gauche. Quant à la vague inférieure, elle se caractérise par l'enchevêtrement de deux groupes de cheveux, qui évoque une corne. La tête est surmontée d'un hippocampe et soutenue par un piédouche. Quatre cordons perlés unissent la figure principale à de petites têtes «coupées».

Au revers, un auriage dirige un cheval androcéphale vers la droite. Le stimulus qu'il brandit ressemble à une branche de gui. Devant l'équidé pend un vexillum carré traversé par une croix de Saint André et orné, à sa base, de deux groupes de trois points. Cet équipage est accompagné dans sa course par un personnage ailé, gravé dans le champ inférieur, dont une main tient un motif longitudinal terminé par un crochet.

Les quarts de statère

TYPE 1 (type BN 6839) (Fig. 2)

L'orientation des éléments est fidèle à celle des statères. Relevons, au droit, la simplification de la chevelure (juxtaposition de trois mèches) et l'absence de l'hippocampe.

* Liège.

1 E. HUCHER, *Études sur le symbolisme des plus anciennes médailles gauloises comprenant la monographie des monnaies des Aulerques Cénomans antérieures au système épigraphique*, dans RN, 15, 1850, p. 98, pl. III.

2 J.-B. COLBERT DE BEAULIEU, *Une énigme de la numismatique armoricaine : les monnaies celtiques des Vénètes*, dans *Mémoires de la Société d'Histoire et d'Archéologie de Bretagne*, 34, 1954, p. 18-19.

TYPE 2 (type BN 6841)

La seule différence à signaler par rapport au type 1 réside dans l'orientation à gauche du cheval androcéphale et du génie ailé.

VARIÉTÉ B

*Le statère*³ (Fig. 3)

Au droit, l'hippocampe est tourné vers la gauche alors que la figure centrale regarde vers la droite.

Le revers est semblable à celui de la variété A, si ce n'est l'apparition d'une roue, pendue à la nuque de l'aurige, et la disparition de l'objet tenu par le génie.

VARIÉTÉ C

Le statère (BN 6837) (Fig. 4)

Cette variété se démarque des précédentes par l'orientation à gauche des éléments du droit et par un style plus emporté, moins raide.

CLASSE II

VARIÉTÉ A

Le statère (Ém. Bourgey, 17-18.VI.1974, n° 206)

L'exemplaire témoigne de l'abandon de l'hippocampe, qui n'est cependant pas remplacé par un autre motif. Mis à part cette remarque, la typologie et la direction des compositions suivent celles de la classe IA.

VARIÉTÉ B

Le statère (Bruxelles, Cabinet des Médailles) (Fig. 5)

Le droit présente le remplacement de l'hippocampe par un groupe de trois points; la figure se dote d'une ornementation supplémentaire, à savoir une boucle d'oreille trilobée, et d'une nouvelle coiffure : la vague supérieure est composée de deux mèches parallèles, en forme d'esses, et d'une mèche frontale nettement dégagée.

Au revers, le cheval androcéphale galopant vers la droite, est conduit au moyen d'un simple stimulus et non plus au moyen d'un rameau de gui.

Les quarts de statère

Type 1 (type BN 6888)

Droit et revers sont orientés vers la droite. Les trois points couronnent la tête du droit.

³ Cette pièce n'est connue que par un dessin; son examen réclame donc la plus grande prudence: E. HUCHER, *Études sur le symbolisme des plus anciennes médailles gauloises comprenant la monographie des monnaies des Aulercs-Diablintes antérieures au système épigraphique*, dans *RN*, 17, 1852, pl. VI, fig. 5.

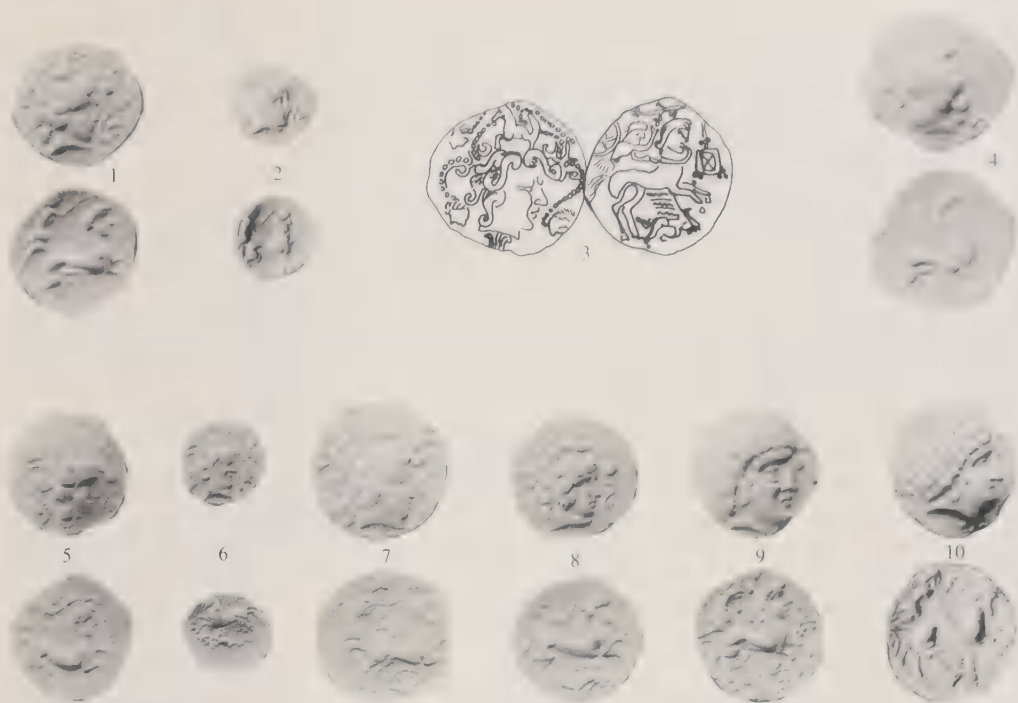


Fig. 1. Paris, BN 6830; 2. Lyon, Musée de la Civilisation Gallo-romaine, n° 582; 3. E. Hucher, (1852), pl. VI, Fig. 5; 4. Paris, BN 6837; 5. Bruxelles, Bibliothèque Royale Albert Ier, Cabinet des Médailles; 6. Péronne, Musée Danicourt, n° 223; 7. Paris, BN 6768; 8. Paris, BN 6; 9. Péronne, Musée Danicourt, n° 255; 10. Paris, BN 6829.

Type 2⁴ (Fig. 6)

Ce type est identique au précédent, exception faite d'un cheval androcéphale courant vers la gauche.

Type 3 (type BN 6889)

Au droit, le visage central regarde vers la droite et est surmonté de quatre points. L'équipage du revers se dirige vers la gauche.

III. Rapprochements typologiques

Les droits et revers de notre série combinent des motifs typiques de l'iconographie monétaire armoricaine; ainsi, une tête centrale, surmontée d'un motif, est entourée de cordons perlés, ou chaînettes, aboutissant à des têtes minuscules; de même, un cheval androcéphale est entouré d'un vexillum, d'un génie et d'un stimulus pour le moins particulier.

Si l'on examine de plus près ces détails, il est possible d'établir des rapprochements étroits avec d'autres numéraires de l'Ouest.

⁴

La pièce n'est connue que par un seul dessin; son examen réclame donc de la prudence; E. LAMBERT, *Essai sur la numismatique gauloise du Nord-Ouest de la France*, I, Paris-Bayeux, 1844, pl. IV, fig. 22.

A. Le droit

La nature et le style de la coiffure s'apparentent aux chevelures de la série à la tête cornue et à la roue (type BN 6768, Fig. 7) et de la série à la tête cornue couronnée d'un sanglier (type BN 6826, Fig. 8).

L'hippocampe est représenté sur les émissions inaugurales de la région; soit il est intégré à l'iconographie⁵, soit il apparaît comme motif contremarqué⁶. Le traitement et la morphologie du cheval de mer, concerné par l'exposé, ne se retrouvent néanmoins que dans un monnayage plus tardif, attribué aux Aulerques Diablintes (type BN 6769c, Fig. 9).

La boucle d'oreille trilobée de la classe IIB n'est associée habituellement qu'à des chevelures laurées, telles que celles choisies par les Aulerques Cénomans (type BN 6829, Fig. 10) ou par les Aulerques Diablintes.

B. Le revers

Le vexillum de la classe IA n'a pour seuls pendants, dans la numismatique armoricaine, que les plus lourds statères cénomans et diablintes (cf. *supra*).

De même, la branche de gui, convertie en stimulus, n'a qu'un unique sosie, gravé sur le type BN 6829. Par contre, la série à la tête cornue et à la roue offre un stimulus apparenté, puisqu'il s'agit d'une «branche de houx».

IV. Datation

La fourchette pondérale des statères de la série à la tête cornue couronnée d'un hippocampe s'étend principalement de 7,50 g à 7,89 g; cette tranche correspond aux premières classes des autres séries à la tête cornue (type BN 6768 et 6826) du monnayage cénoman. La première classe diablinte privilégie la fourchette 7,50-7,79 g.

Il paraît complexe de tenter d'établir l'ordre de création de ces monnayages. Les séries à la tête cornue et le numéraire cénoman débuteraient dans le dernier quart du II^e siècle, si l'on partage l'opinion de J.-B. Colbert de Beaulieu, et participeraient à l'essor des productions régionales dans l'Ouest. Il nous semble que le monnayage diablinte est plus jeune, en raison des observations pondérales et typologiques recueillies : sa première classe procède des plus lourdes pièces du groupe cénoman de la série à l'hippocampe.

V. Observations

À ce stade de l'exposé, il convient de se demander si les statères à l'hippocampe constituaient à eux seuls un numéraire indépendant, limité, ou s'ils représentaient une étape typologique dans l'évolution d'un ensemble monétaire plus important, ensemble dont nous conserverions d'autres témoins (telles les deux autres séries à la tête cornue). Le doute est plus particulièrement possible pour le groupe à la tête cornue et à la roue, frappé, comme nous le pensons, dans la partie centrale de l'Anjou. Toutefois, l'absence de coïncidences caractérisques, et des répartitions géographiques sensiblement différentes ne permettent pas d'établir, de manière sûre, de pareils rapprochements.

Malgré la rareté des lieux de trouvaille enregistrés (Fig. 11), deux observations peuvent être formulées :

1. Les exemplaires à la tête cornue couronnée d'un hippocampe se concentrent dans la partie septentrionale du Maine-et-Loire et dans les franges méridionales de la Sarthe et de la Mayenne. Les homotypies typologiques relevées avec les monnayages cénoman

⁵ Soit un hippocampe dirigé par un aurige (cf. un quart de statère conservé à l'Ashmolean Museum d'Oxford; D. NASH, *Settlement and Coinage in Central Gaul c. 200-50 B.C.*, II, Oxford, 1978, pl. 8, fig. 207).

⁶ Soit le statère trouvé à Basse-Goulaine (Loire-Inférieure); J.-B. COLBERT DE BEAULIEU, *La contremarque dans le monnayage d'or gaulois*, dans *Gallia*, 12, 1954, p. 55-72.



Fig. 11. Carte de répartition de la série à la tête cornue couronnée d'un hippocampe.

(cours de la Sarthe et du Loir) et diablinte (portion septentrionale du cours de la Mayenne) évoquent probablement la contiguïté de ces émissions. Citons, en dernier lieu, de vagues mentions de découvertes réalisées au XIX^e siècle : «Dans la Sarthe», «Dans le Maine»⁷.

2. Les cartes de répartition des séries à la tête cornue intéressent des régions distinctes, à savoir :

- le *Maine-et-Loire*, pour les séries à l'hippocampe et à la roue;
- l'*Ille-et-Vilaine* et/ou le *Morbihan* pour celle au sanglier;
- le *Léon* (partie nord-occidentale du Finistère) pour la série au cavalier (type BN 6764) influencée notamment par la précédente.

Nous sommes donc confrontés à trois régions, plus ou moins proches mais pas forcément voisines, qui auraient choisi et diffusé des typologies monétaires parentes. Ce phénomène pourrait être lié au commerce. Suite à la fouille d'un habitat en Léon (Ile Geignog en Landéda), MM. Giot et Bourhis⁸ mirent au jour un vase baquet tripode, daté de La Tène Finale et importé du Massif Central. Ils remarquèrent, en outre, la présence de cette céramique exceptionnelle dans les deux autres contrées pré-citées, soit près de Quiberon (Morbihan) et à Angers (Maine-et-Loire).

⁷ E. HUCHER, *Études sur le symbolisme des plus anciennes médailles gauloises*, dans *RN*, 20, 1855, p. 173, pl. IV, fig. 5, 6, 7; ID., *L'art gaulois ou les Gaulois d'après leurs médailles*, I, Paris-Le Mans, 1868, pl. 1, fig. 2; ID., *L'art gaulois ou les Gaulois d'après leurs médailles*, II, Paris-Le Mans, 1874, p. 61, 84.

⁸ P.-R. GIOT et J.-R. BOURHIS, *Sur une remarquable céramique gauloise de l'île de Geignog*, dans *Annales de Bretagne*, 71, 1964, p. 61-66.

En abordant l'économie du Léon à l'époque laténienne finale, les archéologues bretons ne s'aventurent pas à se prononcer sur le rôle de l'étain, aucune trace d'exploitation gauloise n'ayant été décelée, mais insistent sur la production de pains de sel dont une certaine quantité était exportée.

VI. Conclusions

Des intérêts économiques communs, une complicité culturelle nécessaire et des contacts relativement étroits expliqueraient les affinités typologiques des émissions à la tête cornue. En effet, leurs créations et développements résulteraient du rôle d'intermédiaires que jouèrent les entités émettrices sur un axe commercial joignant le Finistère au Maine-et-Loire et se prolongeant au-delà, par exemple vers le Massif Central⁹. L'existence de ce tissu est corroborée par d'autres indices archéologiques suggérant les produits importés et exportés.

La pauvreté des cartes de répartition, du matériel recueilli et la complexité de rapprocher données numismatiques et autres documents archéologiques (quand un contexte stratigraphique ne les mélange pas) rend notre démarche périlleuse; néanmoins, ces propositions méritent d'être approfondies¹⁰.

⁹ De plus, un type de statère à la tête cornue couronnée d'un sanglier présente un revers directement inspiré du type Bridiers. Il s'agit de la variété BN 6769B.

¹⁰ Ce qu'une thèse nous permet de réaliser actuellement.

Le cheval androcéphale sur les monnaies celtiques

Katherine GRUEL*

Le cheval à tête humaine est présent sur tous les monnayages celtiques armoricains (Ouest de la Gaule) (La Tour, pl. XX à XXIII), depuis les premières frappes jusqu'aux émissions augustéennes; mais on le trouve aussi à l'extrême Est de la Gaule chez les Trévires (Luxembourg) (LT, pl. XXXVIII) ou sur les premières émissions éduennes en électrum (trésor de Chenoves) et il inspire encore les graveurs de la Gaule Belgique pour des petits bronzes au personnage courant ou à l'archer, frappés après la conquête romaine (LT, pl. XXIX), (Fig. 1 et Pl. I). Cette permanence du type au cheval androcéphale dans l'iconographie monétaire celtique pose le problème à la fois de son introduction et des raisons de son attraction sur les Gaulois. S'agit-il, comme le plus souvent chez les Celtes, d'une copie d'un prototype monétaire méditerranéen? Faut-il donc limiter son sens à une reprise du thème du centaure? Fait-il référence au contraire à la mythologie celtique?... Pour tenter de préciser le sens de ce cheval androcéphale, on évoquera rapidement les divers parallèles iconographiques possibles, puis on dressera un inventaire des particularités remarquables dans le traitement du cheval lui-même et des principaux attributs associés à ce type monétaire. L'association très fréquente du cheval androcéphale avec de petites têtes humaines nous entraînera à aborder plus précisément le rite celtique des têtes coupées. On évoquera donc pour terminer certaines thèses des spécialistes de l'histoire des religions que viendraient accréditer ces monnaies celtiques.



Fig. 1. Localisation des séries monétaires celtiques au cheval androcéphale.

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Les dessins des monnaies (Pl. I, II, III) ont été réalisés par J.F. Enault, CNRS (UMR 126-6) à partir d'agrandissements photographiques de monnaies conservées au Cabinet des Médailles de la Bibliothèque Nationale, Paris, au Musée des Antiquités Nationales, St-Germain-en-Laye et au Musée de Bretagne, Rennes.

On reconnaît dans les monnaies armoricaines, tout comme dans les monnaies trévires, une référence indirecte au statère de Philippe II de Macédoine, encore très nette sur la plupart des droits et rappelée au revers par la présence d'une roue de char. On a souvent évoqué aussi l'influence possible des monnaies de Syracuse (Nash, 1987) et récemment encore, au congrès d'Études celtiques de Paris (juillet 1991), S. Scheers avançait l'éventualité de liens particuliers entre la Gaule du Nord et la Sicile ou l'Italie du sud, par l'entremise des mercenaires. On pense bien sûr au taureau androcéphale de Gela repris par d'autres cités de la même région. Je n'oserais affirmer qu'il s'agit là du prototype recherché! De centaures sur les monnaies grecques, on connaît ceux frappés par les Magnètes en Thessalie (Poole, 1883, p. 34) ou sur les bronzes de Prusias en Bithynie (Wroth, 1889, p. 210-211, Pl. XXXVIII, 4 et 5; Bernhard, 1926). Ils ont pu servir de prototypes aux monnaies à légende BVSV (LT 10141, pl. LIV) émises par les Celtes orientaux mais ils ressemblent peu au type iconographique des pièces occidentales. Par ailleurs, les centaumachies sont abondamment illustrées tant dans la sculpture monumentale grecque que dans la céramique attique peinte (Kollmann, 1987, p. 225-239) et on connaît d'autres cas où la numismatique celtique s'est inspirée d'animaux mythiques grecs non représentés dans les monnayages grecs, comme les sirènes (LT 10159) sur les monnaies de Pannonie (Mainjonet, 1974, p. 112 et 135, n°35). On ne peut donc totalement exclure une influence grecque.

Cependant, on retrouve le cheval à tête humaine dans le bestiaire celtique dès les Ve-IVe siècles, sur le couvercle de la cruche de Reinheim (Kruta, 1982, n°57). Le cheval androcéphale des monnaies celtiques, tout comme celui de Reinheim, n'a ni buste ni bras, seule la tête est entièrement humaine. Ceci le distingue du centaure qui, lui, possède un tronc humain et des bras, parfois même des jambes humaines mais des oreilles et le plus souvent quatre jambes d'équidés (Kollman, 1987, p. 225-239). Le cheval androcéphale celtique est parfois ailé (chez les Aulerques Cenomans en particulier), le centaure aussi. Tous deux ont souvent un sexe fortement souligné, symbole de leur «virilité». Le cheval androcéphale celtique reste beaucoup plus animal que le centaure qui apparaît plutôt comme un homme bestial que comme un cheval humain.... C'est peut-être là qu'est la différence essentielle. Le cheval androcéphale celtique, sans bras, ne peut pas manier d'armes humaines (massue, arc...). Il peut galoper sans entrave ou être bridé, tirer un char conduit par un aurige, être monté par un(e) cavalier(e). En dehors parfois, d'un casque (Pictons) ou d'un bonnet à longue volute (Trévires), ses ornements peuvent être assimilés à un harnachement, certes de luxe : crinière ou queue parfois tressée de perles, collier de un à trois rangs de perles sur le poitrail, crinière en volute... mais il ne s'agit jamais de vêtement... En revanche, il est guidé par un aurige fantastique dont le bras se prolonge en fouet, en rinceau, dont la main au pouce, souvent ithyphallique, tient solidement les rênes si elle ne se transforme pas en cercle perlé, en liane feuillue ou en torche. Il semble parfois piétiner un «génie ailé», souvent armé ou tenant un vase. Il est très fréquemment associé à des symboles dits solaires (roues à 4 ou 8 raies, soleils, lyre, triscèle, croix, rosace, main dressée) ou guerriers (aigle, boeuf ou sanglier-enseigne, joug, vexillum) (Pl. I, II, III).

Les différents monétaires associés au cheval à tête humaine renforcent encore son caractère mythique (Voir tableau I, p. 31-32).

Comme le montre le tableau I qui présente les positions possibles de chacun des éléments iconographiques présents sur ces revers par rapport au thème central du cheval androcéphale, chaque motif a une, à la rigueur deux places déterminées : la lyre, la main, le personnage ailé par exemple sont toujours sous l'équidé, le vexillum et la croix devant. Ce sont plus le style de la gravure, l'évolution des associations, la carte de répartition des trouvailles qui permettent d'attribuer un type à une cité plutôt qu'à une autre, et encore pour les plus anciens, connus par une ou deux monnaies, cela reste très aléatoire. On trouve ainsi un personnage ailé terrassé par le cheval chez les Vénètes, les Aulerques



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2



3



4



5



6



7



8



9



10



11



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Pl. I. 1 à 9 : revers de monnaies armoricaines; 1. or, Sarthe; 2. or, Normandie; 3. Ar, Ille-et-Vilaine; 4. ÉL., Poitou; 5. bill., Côtes d'Armor; 6. bill., Ille et Vilaine; 7 et 8. Bill., Pays de Loire; 9. bill., Côtes d'Armor; 10 à 12 : revers de monnaies émises dans d'autres régions; 10. or, Luxembourg; 11. ÉL., Centre-Est (Trésor de Chenoves); 12. Br., Picardie.



1



2



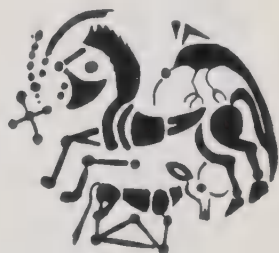
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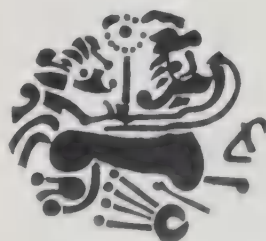
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13

TABLEAU I : POSITIONS DES DIFFÉRENTS MONÉTAIRES PAR RAPPORT AU CHEVAL ANDROCÉPHALE.

| Différent monétaire | dessus | dessous | devant | derrière | répété |
|---|--------|---------|--------|----------|--------|
| Aigle | + | | | | |
| Aiglon + sanglier-enseigne | | + | | | |
| Arbre dans pyramide (?) | | + | | | |
| Aurige | + | | | + | |
| Aurige tenant un bâton | + | | | | |
| Aurige tenant une clé double | + | | | | |
| Aurige tenant un fouet | + | | | | |
| Aurige tenant un rameau feuillu | + | | | | |
| Aurige tenant un torque | + | | | | |
| Aurige tenant une tête coupée (?) | + | | | | |
| Barrière d'hippodrome | | + | | | |
| Buste casqué | | + | | | |
| Buste d'homme dressé, les bras en croix, tenant les jambes du Cheval | | + | | | |
| Boeuf-enseigne | | + | | | |
| Boule | + | + | | | + |
| Boule marquée de 3 points | + | + | | | + |
| Branche feuillue | + | + | | | |
| Candélabre (?) | | + | | | |
| Cavalière nue | + | | | | |
| Cavalière nue brandissant épée et bouclier | + | | | | |
| Cercle perlé pointé | | + | + | | |
| Cercle pointé + S perlé | | + | | | |
| Croix | | | + | | |
| Croix bouletée | | | + | | |
| Croix bouletée + chaîne perlée | | | + | | |
| Croix dans cercle | + | | + | + | |
| Croix dans cercle sur trépied | | + | | | |
| Disques emboîtés décorés d'un cercle de perles | | | + | | |
| Échelle | | | + | | |
| Extrémité ornée du bonnet du cheval | + | | | | |
| Fleur | | + | | | |
| Fleur sur un arc | | + | | | |
| Griffon | | + | | | |
| Hampe sommée d'un cercle perlé | + | | | | |
| Hippocampe | | + | | | |
| Losanges emboîtés centrés d'un cercle + sanglier | + | | | | |
| Lyre couchée | | + | | | |
| Lyre dressée | | + | | | |
| Lyre dressée entre 2 cercles | | + | | | |
| Lyre sur ligne d'oves | | + | | | |
| Main ouverte dressée, doigts collés, au- dessus d'un joug | | + | | | |
| Main ouverte dressée, doigts collés, entre S et A | | + | | | |
| Oiseau | + | | | | |
| Palme | + | | | | |
| Personnage à 1 aile allongé au sol | | + | | | |
| Personnage à 2 ailes, allongé au sol | | + | | | |
| Personnage à 2 ailes, allongé au sol, tenant 1 cercle perlé | | + | | | |
| Personnage à 1 aile, allongé au sol, et armé | | + | | | |
| Personnage, allongé au sol, tenant un vase ansé ou une situle | | + | | | |
| Personnage, allongé au sol, tenant une tête coupée (?) | | + | | | |
| Personnage, allongé au sol, tenant une lance et un bâton | | + | | | |
| Rinceaux | + | | + | + | + |
| Rosace dans cercle perlé | | + | | | |
| Roue à 4 raies | | + | | + | |
| Roue à 7 raies | | + | | | |

| Différent monétaire | dessus | dessous | devant | derrière | répété |
|--|--------|---------|--------|----------|--------|
| Roue à 8 raies | | + | | | |
| Roue perlée à 4 raies + motif en forme de bobine avec une mèche | | + | | | |
| Roue perlée à 4 raies | | + | | | |
| Roue perlée à 7 raies | | + | | | |
| Roue perlée à 8 raies | | + | | | |
| Roue perlée à 8 raies posée sur un arc perlé aux extrémités en volutes | | + | | | |
| Roue de char | | | | + | |
| Sanglier-enseigne | + | + | | | |
| Soleil | + | + | | | + |
| Tente | | + | | | |
| Tête humaine renversée | + | | + | | + |
| Tête humaine couchée | + | | | | |
| Tête humaine dressée | | | + | | |
| Tête humaine + croix dans cercle perlé | + | | | | |
| Tête humaine pendante enchaînée à la bride du cheval par 3 anneaux | | | + | | |
| Torque | + | | + | | |
| Torque + 3 points dans un cercle bouleté | + | | | | |
| Triangle aux sommets pointés | + | | | | |
| Triple ligne de 3 traits | | + | | | |
| Triscèle | | | + | | |
| Vexillum à 1 noeud | | | + | | |
| Vexillum à 3 noeuds | | | + | | |
| Vexillum à 5 noeuds | | | + | | |
| Vexillum à 7 noeuds | | | + | | |
| Vexillum à 9 noeuds | | | + | | |

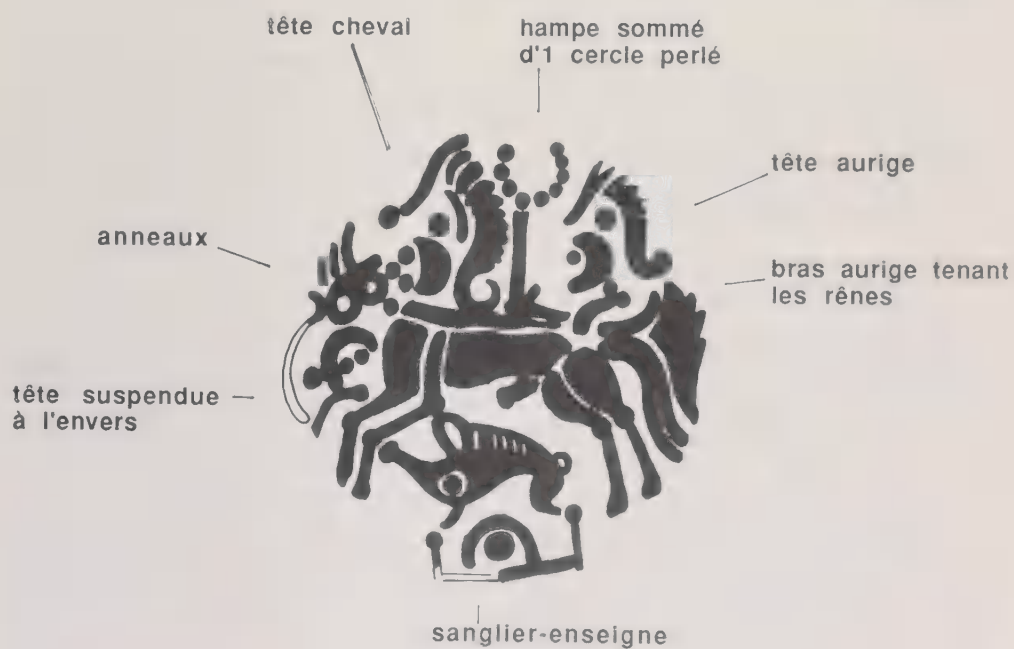
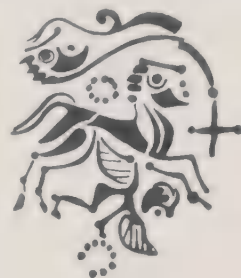
Cenomans, les Trévires¹. Les motifs répétés plusieurs fois sur la même image sont assez peu nombreux : soleils, boules, rinceaux et petites têtes humaines. Celles-ci, de même facture que celle du cheval et bien souvent de l'aurige, occupent fréquemment le champ de la monnaie. L'association du cheval androcéphale avec ces petites têtes humaines qui ornent le champ de la monnaie est présente chez les Vénètes, les Osismes, les Riedones, les Coriosolites (Pl. III).

Peut-on voir, dans ces têtes, des têtes coupées? Les textes antiques font plusieurs fois allusion à cette coutume de couper les têtes des morts. Certains témoignages se réfèrent à des événements précis : en 390 av. J.-C., lors du sac de Rome, les Celtes utilisent un jour sur trois à couper les têtes des Romains morts (Diodore, V, 29, 5 et XIV, 115, 4-5). Pendant la seconde guerre punique, les Gaulois désertèrent après avoir tué un grand nombre de Romains et coupé les têtes des morts (Polybe, III, 67, 1-3). Ailleurs c'est la tête du chef ennemi qui est coupée puis embaumée : celle du roi de Macédoine, Ptolémée Keraunos en 281 (Justin), celle du consul romain Atilius, en 225 (Polybe, III, 67, 1-3), celle du consul Postumius, en 216 (Tite Live, *Hist. rom.*, X, 26, 11)... Ces sources diverses montrent la réalité d'une pratique qui a frappé l'imagination des contemporains. Elles nous permettent de considérer que ces représentations monétaires peuvent être une transposition de rites de cavaliers au cours desquels on attachait les têtes coupées des ennemis au poitrail des chevaux et dont Posidonios d'Apamée, aux dires de Diodore et de Strabon (*Géog.*, IV, 4, 5), fut témoin.

Pl. III : 1. LT 6920v., or; 2. LT 6920v., or; 3. LT 6555, billon; 4. LT 6541, billon; 5. LT 6551, billon; 6. LT 6533, or; 7 et 8. LT 6676v., billon vénète, cl.II; 9. LT 6732, billon riedone, cl.VII. →

1

Les similitudes entre les statères attribués aux Aulerques Cenomans (aire de circulation couvrant approximativement le département de la Sarthe, France) et ceux émis par les Trévires (Luxembourg) n'ont jamais été complètement expliquées. Sur les monnaies de la région du Mans, le cheval est toujours ailé, jamais sur celles trouvées au Luxembourg... Le reste du mobilier archéologique ne vient pas pour l'instant confirmer la réalité de contacts entre les deux cités. Il reste probable pourtant que les unes ont servi de modèles aux autres (Allen, 1971).



Revers de la classe II de la série des billons vénètes, à la tête coupée suspendue aux rênes



«Aux ennemis tombés, ils coupent la tête et l'attachent au cou de leurs chevaux. Quand aux dépouilles maculées de sang, ils les emportent en butin en exécutant une marche triomphale et en chantant un hymne de victoire...» (Diodore).

«A cette absence de réflexion, s'ajoute une coutume barbare et inhumaine, qui se retrouve chez la plupart des nations du Nord : au sortir du combat, ils suspendent au cou de leur chevaux les têtes des ennemis qu'ils ont tués et les rapportent avec eux pour les fixer en spectacle au grand portail de leurs maisons. – Posidonios dit en avoir été souvent témoin et avoir été long à se faire à cette vue; toutefois, l'habitude avait fini par l'y rendre insensible –. Quand aux têtes des grands personnages, ils les montraient aux étrangers conservées dans de l'huile de cèdre et se refusaient à les vendre, fût-ce au poids de l'or» (Strabon, *Géog.*, IV, 4, 5).

Posidonios d'Apamée voyagea en Gaule une vingtaine d'années avant la conquête romaine (au début du I^{er} siècle av. J.-C.), c'est-à-dire lorsque ces monnaies circulaient. Pour trois types au cheval androcéphale au moins, le parallèle avec ces textes est évident.

La représentation la plus convaincante se trouve sur la classe II du monnayage de billon vénète : Elle présente au droit une tête humaine centrale encadrée de 4 petites têtes liées par des rinceaux et au revers un cheval androcéphale, surmonté d'une hampe sommée d'un cercle perlé et guidé par un aurige, au-dessous, un sanglier-enseigne et suspendue au poitrail par trois anneaux attachés à la bride, une tête humaine (Pl. III, 7 et 8).

La classe VII des billons riedones offre un revers au cheval androcéphale bridé, conduit par un aurige, sautant par dessus une roue perlée à 8 raies posée sur une double volute, en avant du poitrail sous le mors une tête humaine dressée (Pl. III, 9).

Enfin, les Aulerques Cénomans ont frappé une monnaie sur laquelle on peut interpréter comme des têtes coupées les espèces de sacs tenus par l'aurige et par le personnage foulé aux pieds par le cheval; en avant du cheval pend un vexillum à 5 noeuds.

D'autres documents iconographiques illustrent cette même scène; deux d'entre eux présentent une similitude particulière avec nos monnaies : l'applique de bronze de Kärlich, datée du Ve s. av. J.-C., sur laquelle on interprète la forme arrondie suspendue à la bride du cavalier comme une tête coupée (Megaw, 1970, n°33), le cavalier du pilier d'Entremont sur lequel on croit deviner une tête très abîmée (Espérandieu, 1931, I, n°105) et celui du grand vase peint d'Aulnat (Périchon, 1987)...

De ces représentations monétaires, on retiendra trois éléments principaux :

- Elles sont visiblement liées à l'exaltation de la guerre, une guerre de cavaliers : armes, boucliers, enseignes guerrières, vexillum, animaux réputés pour leur caractère belliqueux et courageux (l'aigle, le sanglier, le cheval lui-même), personnages terrassés sous les sabots du cheval : tout un registre iconographique d'où semblent exclues les références à l'agriculture, au commerce.

- Elles se réfèrent à un culte solaire comme le montrent les attributs couramment associés au cheval. En revanche, on notera l'absence de représentation de la massue, à l'exception du fouet de l'aurige ou du bâton tenu par le personnage renversé. Pas de chaudron non plus, ni de foudre!

- Elles dégagent une impression de vitalité (cheval toujours galopant ou caracolant, exubérance ornementale, présence de rameau feuillu, parfois même en fruits, renvoyant peut-être à l'arbre de vie mais assurément à la nature productive), de virilité et de fécondité (pouce phallique, sexe en érection du cheval).

L'équivalence symbolique entre tête et phallus semble établie. C. Sterckx (1985-1986, p. 14) rappelle la relation constante entre la tête et la procréation. La tête est le siège de l'âme immortelle, de l'élan vital. Cet étalon «à tête humaine», encadré de petites têtes identiques à la sienne, serait le symbole de l'accroissement de la puissance vitale du cavalier ou de l'aurige vainqueur, c'est-à-dire du guerrier gaulois, de l'élite sociale de la cité. Cet étalon androcéphale pourrait-il être le complément masculin de la déesse Epona ? Peut-on l'assimiler au Dieu gaulois Apollon Maponos, au gallois Mabon? ou même à Sucellos (Sterckx, 1986, p. 57-58)? Les légendes celtiques médiévales conservent des

réécits mythiques associant le pouvoir royal et le cheval androcéphale, en particulier celle du roi *Mach* dont la tête est échangée avec celle de son cheval (Brekilien, 1987).

L'histoire des religions est un domaine trop complexe pour s'y aventurer très avant sans une solide connaissance des cultures indo-européennes. Il est certain cependant que ces documents monétaires présentent des associations dignes de réflexion et qu'il paraît difficile de réduire le cheval androcéphale à une pâle reproduction du mythe du centaure. L'importance du cheval dans la tradition indo-européenne n'est plus à démontrer, tout comme la pratique de l'exposition des têtes coupées, ce sont des réalités chez les Celtes bien qu'ils n'en aient pas l'exclusivité.

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Figuration d'une légende de la mythologie germanique sur une monnaie gauloise tardive en potin

Jean DEBORD*

I. Introduction

Parmi les sept cent quarante-sept monnaies exhumées au cours des fouilles du site gaulois tardif de Villeneuve-Saint-Germain (Aisne), figure un exemplaire du type LT XXXI 9194 (BN 9194 à 9196; Scheers, 189), type relativement rare dont il n'est connu que quelques unités. C'est lui qui fait l'objet de la présente note. Simone Scheers (1977, p. 167) estimait qu'il fallait donner aux *Meldi* cette monnaie en potin que La Tour (1892, pl. XXXI) classait aux *Silvanectes* tandis que Muret et Chabouillet la faisaient figurer, dans le *Catalogue des monnaies gauloises de la Bibliothèque Nationale* (1889, p. 212), à la suite des potins au sanglier des *Leuci*. Nous verrons que c'est plutôt aux *Suessiones* qu'il y a lieu d'en attribuer la responsabilité, plus particulièrement à l'atelier monétaire de Villeneuve-Saint-Germain.

II. Description de la monnaie

Le droit (Fig. 2, 1) montre une tête à droite dont la chevelure est rendue par deux rangées de petits traits courbes et parallèles encadrant le visage. L'oeil, en amande, est vu de face. Le menton est saillant et les lèvres sont indiquées par deux traits épais, superposés, devant lesquels se dessine, en trait léger, un motif en amande. Un grènetis occupe le bord de la pièce devant le visage.

Le revers (Fig. 2, 2) montre une scène étrange où l'on voit un loup gigantesque dévorant le bras gauche d'un personnage moustachu. Les poils hérissés sur son dos traduisent la fureur de l'animal. Une roue solaire occupe l'espace laissé libre entre le personnage et les pattes postérieures du fauve.

III. Attribution

Simone Scheers inventoriait sept exemplaires seulement de cette monnaie, (1977, p. 733). Il convient d'y ajouter celui de Villeneuve-Saint-Germain. Les provenances connues sont : Arcy-Sainte-Restitue (Aisne), 1 ex. ; Fère-en-Tardenois (Aisne), 1 ex. ; Villeneuve-Saint-Germain (Aisne), 1 ex. ; Meaux (Seine-et-Marne), 2 ex. ; Paris, 1 ex. Les provenances de Pommiers (Aisne), 1 ex. et forêt de Compiègne, 3 ex., citées par Adrien Blanchet (1905, p. 367, n. 2) résultent d'une confusion avec le potin LT 7873

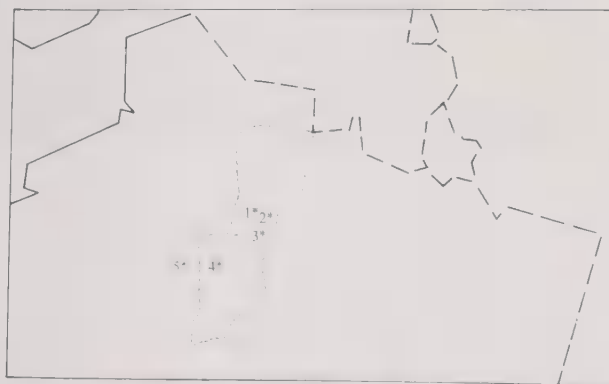


Fig. 1. Carte de répartition de la monnaie LT XXXI 9194 : 1. Villeneuve-Saint-Germain; 2. Arcy-Sainte-Restitue; 3. Fère-en-Tardenois; 4. Meaux; 5. Paris.

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Fig. 2. 1-2. Droit et revers de la monnaie en potin du type LT XXXI 9194 (éch. 1 x 4); 3. Type LT 9194 (potin, éch. 1); 4. Type LT 7220, dit «au lion et au sanglier superposés» (argent, éch.1); 5. Type dit «au bige» (argent, éch. 1); 6. Type dit «fruste à la chevelure nattée» (argent, éch.1); 7. Type LT 7870 (potin, éch.1). L'homotypie du droit suppose, pour ces différents monnayages, une origine commune. 8. Type LT 7873 (potin, éch.1). Sur cette monnaie, le visage ornant le droit est remplacé par une représentation du soleil sous la forme d'un fleuron dérivé du svastika. 9. Panneau extérieur du chaudron de Gundestrup. La scène figurant au bas de ce panneau illustre la légende relative au dieu Tyr et au loup Fenrir. Comme sur le potin gaulois LT 9194, c'est l'instant précis où le loup referme ses mâchoires sur le bras du dieu qui est représenté (d'après L'art gaulois, (coll. Zodiaque), Paris, 1956, p. 243, pl. 5).

comme le montre bien notre collègue (1977, p. 734, note 695). Il en va de même pour la provenance de Vernon (Eure) citée par Louis Le Clerc (1897, p. 107), qui concerne

probablement le type BN 9199 (Scheers, *op. cit.*). La carte de répartition (Fig. 1) semblerait donc situer le centre de diffusion de ce numéraire en pays des *Suessiones*. Simone Scheers penchait plutôt pour une attribution aux *Meldi*, arguant que «le site de Pommiers ne comptait même pas un seul exemplaire parmi les 1945 monnaies recueillies sur l'emplacement de l'*oppidum* et inventoriées par Vauvillé» (1977, p. 168). Mais alors le gisement de Villeneuve-Saint-Germain n'était pas encore connu. Nous avons montré depuis (Debord, 1984) que les deux sites se sont succédé dans le temps et que leur population monétaire est totalement dissemblable (Fig. 3). L'atelier monétaire de Villeneuve-Saint-Germain représente le déperchement de l'atelier de Pommiers et il est à l'origine de monnaies en bronze coulé, attribuées précédemment aux *Silvanectes*, ainsi que d'un monnayage tardif en argent (Debord, 1989). Or, le «portrait» figurant au droit de ces potins et de ces pièces en argent présente une très grande analogie avec celui de la monnaie que nous étudions ici (Fig. 2, 3 à 7). Cette homotypie du droit semble bien indiquer une origine commune pour ces différents monnayages et c'est donc avec une très grande probabilité que nous pouvons indiquer l'atelier de Villeneuve-Saint-Germain comme responsable de l'émission du type LT XXXI 9194.

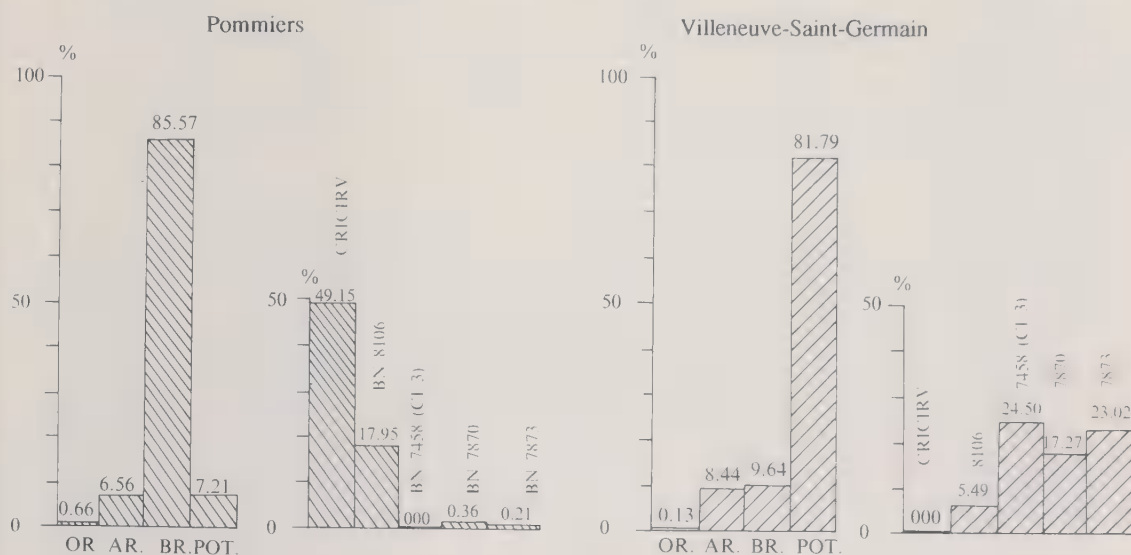


Fig. 3. Les populations monétaires de Pommiers et de Villeneuve-Saint-Germain sont totalement dissemblables, tant par la nature des métaux que par les types dominants, ce qui implique une occupation diachronique des deux sites.

IV. La légende du loup Fenrir et du dieu Tyr

La figuration du revers est éclairée par une légende de la mythologie germanique¹ qui nous conte l'histoire du dieu scandinave Tyr dont la main fut broyée par le loup Fenrir.

Ayant été avertis par un oracle de l'entreprise que méditait contre eux ce loup géant, les dieux décidèrent de l'enchaîner afin de le mettre hors d'état de nuire sans faire couler le sang qui aurait souillé leur demeure. Par deux fois, ils le lièrent à l'aide de chaînes que le monstre rompit aisément. Ils s'adressèrent alors aux nains forgerons. Grâce à la magie, ces derniers confectionnèrent un lien doux et léger, mais si solide que nul n'en viendrait à bout. Alors, les dieux lancèrent à Fenrir un défi : chacun d'entre eux, disaient-ils, avait en vain tenté de rompre ce lien; que lui, le loup, fasse donc un essai pour montrer sa force. Flairant un piège, ce dernier consentit à relever le défi si les dieux lui donnaient un gage de leur bonne foi; que l'un d'eux mette une main dans sa gueule durant l'épreuve et lui la broierait si on l'avait trompé. Seul Tyr étendit sa main droite et la mit dans la gueule

¹ De ces légendes scandinaves, nous avons des rédactions médiévales. Les recueils de poèmes épiques connus sous le nom d'ancienne et de nouvelle *Edda* relatent, pour la plupart, les aventures des divinités germaniques.

du loup tandis que les autres liaient le monstre. Celui-ci se débattit en vain et, comprenant qu'il avait été joué, referma ses mâchoires sur le bras du dieu. C'est bien cet instant précis qu'illustre le revers de la monnaie gauloise. Qu'il s'agisse ici du bras gauche au lieu du bras droit s'explique aisément par le fait que l'image en relief de la pièce est inversée par rapport à l'image en creux du moule. C'est cette même scène que l'on retrouve au bas de l'un des panneaux extérieurs du chaudron de Gundestrup (Fig. 2, 9).

Il est surprenant que cette représentation qui paraît si évidente n'ait pas retenu l'attention des spécialistes qui, depuis longtemps, ont tenté d'interpréter la symbolique des images monétaires gauloises. Cela tient sans doute au fait que le support en est une humble pièce de bronze coulé alors que ce sont surtout les monnaies frappées sur des flans en or, métal beaucoup plus prestigieux, qui ont fait l'objet de recherches.

Tyr était invoqué par les guerriers à cause de son courage et de sa force. «Il y a encore un Ase qui s'appelle Tyr. Il est très intrépide et courageux et a grand pouvoir sur la victoire dans les batailles. Pour cela, il est bon que les hommes vaillants l'invoquent» (*Gylfaginning*, chap. XIII)². Mais il apparaît aussi comme le dieu du droit, le garant de la parole donnée. N'ayant pas hésité à sacrifier sa main pour ne pas se dédire, il est celui dont la parole ne saurait être mise en doute (Grappin, 1963, p. 58-59). Pour Jan de Vries, ce mythe exprime l'aspect tragique du monde qui ne peut subsister sans injustice puisque le dieu à qui est confié le maintien de la justice est obligé de se parjurer pour vaincre une puissance mauvaise (1984, p. 111).

V. La légende du crépuscule des dieux

La scène ornant le revers de notre monnaie pourrait aussi, bien que de façon moins évidente, illustrer la légende du «crépuscule des dieux» qui décrit le cataclysme provoquant la fin du monde qui sera suivie de sa résurrection. Un loup, fils de Fenrir et d'une géante, est assez puissant pour avaler le soleil, plongeant ainsi le monde dans les ténèbres et le froid. Cet épisode est relaté dans la *Voelupsa*, l'une des pièces les plus anciennes des légendes eddiques. Au cours du combat terrible que se livrent les dieux et les géants, Odin attaque le loup Fenrir, «mais la gueule du monstre est si large qu'elle engloutit d'un seul coup le maître des dieux» (Grappin, 1963, p. 86). C'est alors le temps de la violence, des meurtres, de la terreur, le «temps des loups». Plus rien n'est sacré, le monde est mauvais. Pourtant, du néant bientôt renaîtra un monde nouveau fait de paix et de bonheur.



Fig. 4. Fac-similé de la monnaie d'or BN 6925 (dessin P.-M. Duval, 1987, p. 22).

En même temps que la mésaventure survenue au dieu Tyr, le potin gaulois pourrait donc évoquer le combat d'Odin et de Fenrir, tandis que la roue placée sous les pattes du monstre pourrait signifier la renaissance d'un monde nouveau par restitution du soleil sortant du ventre du loup. On retrouve cette scène, évoquée de manière beaucoup plus explicite, sur le demi statère d'or BN 6925 traditionnellement attribué aux *Unelli* (Fig. 4), où l'on voit le loup avalant la roue solaire et le croissant lunaire tandis que le rameau verdoyant qui semble sortir de son fondement évoque la renaissance de la végétation. Cette image monétaire a été bien analysée par Paul-Marie Duval (1981a, p. 67-72; 1981b, p. 376-382; 1987, p. 22-25) qui souligne que ce phénomène d'absorption et de restitution du soleil se retrouve dans le paganisme antique, notamment dans la religion pharaonique où l'on voit la déesse Nout avaler le soleil le soir pour s'en délivrer le matin, après qu'il eut parcouru son corps, pour donner naissance à un nouveau jour. Curieusement, la composition du sujet figurant au revers du potin LT 9194 rappelle celle des peintures et des bas-reliefs de l'Égypte antique où l'on voit Nout, déesse de la nuit, dans une position semblable à celle du loup.

VI. Signification de cette représentation sur la monnaie gauloise tardive

La scène prend toute sa signification sur cette monnaie tardive émise très probablement, nous l'avons vu, par les *Suessiones* durant la période troublée, mais de liberté relative qui suivit la fin de la guerre des Gaules.

César nous apprend qu'au moment de la guerre, les *Suessiones* étaient gouvernés par Galba, lequel «parce qu'il était juste et avisé» avait été placé à la tête de l'armée confédérée qui devait affronter les Romains (*B.G.*, II, 4). Victorieuse des Gaulois qui furent défaits sur l'Aisne (*B.G.*, II, 8), l'armée de César se dirigea vers *Noviodunum* (*oppidum* de Pommiers), leur place forte principale, où ils firent leur soumission. Ils donnèrent comme otages deux fils du roi Galba lui-même et livrèrent toutes les armes que la ville renfermait (*B.G.*, II, 13). Il n'est plus question d'eux dans les Commentaires après leur soumission de 57 av. J.-C., et même en 51 av. J.-C., année qui fut très agitée en Gaule Belgique, ce qui semble bien montrer qu'ils sont restés à l'écart de toute révolte. L'installation d'une nouvelle agglomération dans un site de méandre, à Villeneuve-Saint-Germain, avec le droit d'émettre des monnaies, comme l'atteste la présence de l'atelier monétaire transféré de *Noviodunum* (Debord, 1989), prouve qu'ils avaient conservé une certaine indépendance. Situé en moyenne vallée d'Aisne, à la limite orientale de Soissons (*l'Augusta Suessionum* des Romains) et à moins de six kilomètres de *Noviodunum* (*oppidum* de Pommiers), le site gaulois de Villeneuve-Saint-Germain est maintenant bien daté par le mobilier archéologique qui en est issu. Fibules, monnaies, amphores, céramique commune, ainsi que différents objets tels une lampe à huile ou un stylet, forment un faisceau d'indices convergents permettant d'en fixer l'occupation entre les années 50 et 20/15 av. J.-C. (voir Debord, 1984 et 1987b). Il faut donc voir dans l'image ornant le revers du potin gaulois un moyen de propagande à la gloire d'un pouvoir nouveau, d'un chef qui veut ainsi marquer sa puissance et son courage, qui veut apparaître comme le garant du droit et de la justice, comme l'instigateur d'un nouvel ordre, fait de paix et de bonheur, succédant à l'ordre ancien et décadent qui vient de s'effondrer. Nous avons vu que le «portrait» figurant au droit de cette pièce se retrouve, presque identique, sur d'autres espèces en bronze coulé ou en argent issues de l'atelier de Villeneuve-Saint-Germain qui n'a fonctionné qu'un quart de siècle environ. On peut penser que toutes les émissions de cet atelier ont eu le même objectif, la glorification du nouveau «prince». Sur l'une de ces monnaies, le type LT XXXI 7873 (Fig. 2, 8), ce chef n'a pas hésité, en toute modestie, à remplacer son portrait par le soleil lui-même, représenté par un élégant fleuron dérivé du svastika. L'utilisation de l'argent pour une partie de ce monnayage tardif lui confère un caractère précieux traduisant une volonté de prestige tout à fait en accord avec celle qui se dégage de la présence d'un rempart imposant qui n'avait plus, à cette époque, de caractère fonctionnel mais devait témoigner seulement de la richesse de la nouvelle agglomération, de son pouvoir politique et religieux, de son rôle économique (Debord, 1990, p. 145-149). De même, la présence de fossés couverts à caractère monumental, d'une architecture très élaborée, type de construction exceptionnel dont nous ne connaissons pas d'équivalent dans le monde

celtique, ne peut que traduire cette même volonté (Debord, Lambot, Buchsensschutz, 1989).

VII. Conclusion

Sa figuration au revers d'une monnaie gauloise montre l'ancienneté de cette légende germanique qui nous est contée dans le recueil anonyme de poèmes épiques du haut moyen âge, connu sous le nom d'*Edda*. Peut-être ces légendes sont-elles le reflet des croyances des celtes. À l'époque de la conquête, l'histoire du dieu Tyr et du loup Fenrir devait être connue, sinon de tous, au moins d'une élite, puisqu'elle a pu servir à la propagande d'un pouvoir nouveau.

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The Lead Mint Weight and the Corresponding Staters with the Iconography of the Parisian Gaulish Staters

Andrej RANT*

1. Introduction

In 1983 in the town Prahovo in Eastern Serbia a square lead plate with the picture of a Celtic horse on one side and the inscription on the other side was found. The object is most obviously a weight, as the antique weights were usually of lead, having a square form. The horse on the weight, shaped with all the decoration and net-like ornaments, even in the details agrees with the horse on the reverse of the stater of the Gaulish tribe of Parisians (Fig. 1).

In Kladovo, which is a bit North from Prahovo, a unique stater with the same reverse as on the weight was found some years later. The unknown, very rare or even unique coins are doubtlessly a great challenge and attraction for a numismatist. A case of getting a unique coin and a mint weight with identical dies surely is an outstanding curiosity.

2. Weight Description (Fig. 2 and 4)

Obv. : Inscription in four lines is partially readable. At the bottom and at the right side there are a dotted and a lined border. Under the lined border there is an additional dotted margin. The left and the upper side have no borders and it is obvious that the plate was cut in these two spots. In the middle two lines at the left side a half of the first letters is missing. On the right upper side a subsequent cut into lead in the form of the letter X is visible.

Rev. : A raising horse with a dotted mane is turned to the left. The space under the neck is filled with three dots. The weight being cut, the back foot and the tail are missing. Besides the horse's head there is an ornament, much alike a torques, and beneath it there is another spiral ornament. Over the horse a net-like ornament is spread. In the left upper corner of the non-cut sides of the weight a part of a circle border is visible, indicating that the weight reverse was struck with the die with which the coins actually have been made.

Square plate, size 26x26 mm, thickness 3-5 mm. Mint lead, weight 27,114 g, specific weight 11,3 g/cm³, volume 2,4 cm³. White lead patina.

3. Stater description (Fig. 3)

Obv. : Man's head, manufactured in rough style, turned to the right. Nose and mouth are emphatically expressed. The cheek's recess, indicated by two lines, emphasizes the cheek-bone. Hair is falling behind the ear.

Rev. : Identical die as with the weight reverse. Mint gold, weight 6,522 g, purity 0,964 fine, fine weight 6,287 g, diameter 15 mm, thickness 1-3 mm.

The horse and the net-like ornament on Parisian staters should, according to certain opinions in the literature, represent a highly stylised picture of a horse with a cart (canopy). Because these staters were Celtic copies, made according to the pattern of golden staters of Philip of Macedon. Regarding the style, the horse on the weight is not stylised, whereas on the Parisian staters all grades of simplifications can be found. The

* Numismatic Society of Slovenia, Ljubljana, Slovenia.

head on the stater obverse is not very much stylised. The gold coin is struck on a very «short» flan and only the middle part of the coin picture is represented on it¹. Both the non-stylisation and the short flan point to the earlier dating of the weight and the coin.

4. An Attempt of the Epigraphic Explanation of the Text

The text is written in lapidary Roman letters. The third line can be read clearly and completely. Some letters (the second and the fourth letter of the first line and the second letter of the second line) are less visible. The last letter of the fourth line is not completely impressed as it is supposed to be an N. The meaning is given to it if read as follows :

L.C E S T I (N?)

V(S?) L F. C B

A S I L I S C O

. T A I O N

L(ucius) Cestin(us), L(ucii) f(ilius) c(udit) B/asili(i) Sco/taion

Translation : Lucius Cestinus, the son of Lucius, has struck (the weight) for the king of Scots.

Interpretation of the text is sensitive as it is expected from the function of the weight, that it is written on it, who has made it or respectively, who is responsible for it (L. Cestinus), and for whom or on behalf of whom it has been struck. Lapidary Roman letters reveal that the author of the weight comes from Roman cultural sphere, additionally confirmed by the Roman way of the name presentation.

The expression BASILI, which is perfectly readable, is a Greek dative βασιλι = βασιλεί, written in Roman letters. The expression basileus applied instead of rex should not disturb, as it is most likely that on Balkan due to the enormous Greek influence and tradition, the Celtic sovereign was called a basileus. SCOTA/ION is genitive plural of SCOTI.

There is another possible interpretation. BASILI SCO. TAION could be perhaps read as BASILI SCO(RDIS)TAION, i.e. «to the King of Skordisks», with an abbreviation, indicated by a full stop. Due to the lack of space the name was abbreviated to the initial syllable and to the formative syllable. This explanation agrees with the geographical origin of the coin and of the weight. The name Skordisk appears in the sources as follows : Scordisci² Σχορδισκῶι³, Σχορδίσται⁴

5. Function of the Weight and its Measure

The die identity of both reverses described above proves that the stater belongs to this weight. The function of the weight is explained by finding of this stater. When demonstrating the process in the mint, preceeding the striking itself, it is obvious that before melting, the mint workers first had to weigh a certain amount of gold, corresponding to the pouring of the particular number of flans. For this purpose the officially marked weights have been used. If the weight of the mint weight is divided by the weight of the corresponding stater, the measure – how many coins have been weighed – is obtained. The described weight being reduced, it is only possible to state its original weight by reconstruction of the volume. I conclude, regarding the present square form and the fact, that the two adjoining sides have been cut, that the original form was square, too, especially as the original antique weights were square as well. In my

¹ Similar coining with a wide die on a short flan can be met with the Sava type silver coins of the «Bretzel Ear A» type.

² *CIL*, III, 3400; *Trog.*, XXXII, 3, 5; *Vell. Patere.*, II, 8, 3; 39, 3; *Liv.*, XL, 57, 7; *XLI*, 19, 3.

³ *Strabo*, 293, 296, 313-315, 317, 318; *Appian, Illyr.*, 2, 3, 5.

⁴ *Strabo*, VII, 3, 2 (296) saying clearly : «The Skordisks are called Skordists as well».

opinion, according to the cut border of the obverse and to the missing back part of the horse on the reverse, the side of the square should have been about 3 mm longer. According to the reconstructed dimensions $29 \times 29 \times 3,5$ mm (i.e. 3,5 mm – average thickness), the volume of the mint weight should be $2,94 \text{ cm}^3$, with respect to the lead specific weight of $11,3 \text{ g/cm}^3$, the approximate original weight of the mint weight of 32,22 g is obtained. This weight corresponds to the weight of 5 staters, the relationship being very practical for weighing, as this number can easily be established and controlled, as it equals the number of hand fingers. Anyhow, by weighing of gold for each individual melting several such equal weights have been applied. The cutting and thus reducing of the mint weight additionally confirms its function. The money is getting worse as the time passes. The staters of Phillip and Alexander as the patterns of the Celtic ones, have weighed about 8,2 g, containing extremely pure gold. The staters of Gaulish tribe of Parisians have weighed from 6,6 to 7,6 g⁵. Their weight has not been reduced very much in the course of time, yet the purity of gold has fallen significantly. Their oldest staters had the pure weight of 5 g, whereas the youngest ones only of 2,4 g, the purity thus having fallen from 17,5 to 8,6 carats (i.e from 0.750 fine to 0.360 fine)⁶. As an indicator of relative chronology the data about metal purity are even more relevant than the weight. Our stater with fine weight of 6,28 g and purity of 0.964 fine (23,5 carats) belongs to the earliest period of Celtic coining. Adding the alloys to the gold, less and less of pure gold was weighed for individual meltings. For this purpose the weights had to be adapted and were reduced. As further cutting was not possible any longer, the measure of the weight was changed, so that it was valid for 10 coins instead for 5. The mint worker has indicated it by engraving the Roman number X on the weight, which is to be seen in the right upper corner. Some years ago I saw a golden subaerat with the same obverse as the described one. Its existence points to the quality of stater getting worse down to the subaerat.



6. Conclusion

The golden Celtic stater belongs to the mint weight, as their reverses are identical. As to the iconography the stater belongs to the staters of Gaulish tribe of Parisians. Non stylisation of the motive, the short flan size, and above all the weight and purity show the early dating of it. The fact of the weight being reduced points to its function. It is

⁵ R. FORRER, *Keltische Numismatik der Rhein- und Donauländer*, 2. Graz, 1969, p. 16.

⁶ *Ibidem*.

additionally proved by the subsequent engraving of the letter X. The Latin legend says that the mint worker was a Roman and that the weight has been manufactured for the King of SCO (maybe Skordisks). The finding of the mint weight as well as the finding of the corresponding stater with the motive typical for Parisians in Serbia is a very surprising and interesting discovery. The mint weight is a proof that the staters were coined in Serbia as well. Eastern from the river Morava, there are rich gold mines (Majdanpek, Bor) on the territory where the Skordisks have lived. Strabo⁷ quotes that in the war time between the Dacians and the Bois, the Skordisk and the Taurisks have lived by the river Paris.

These facts lead to the association and presumption that the Parisians were called according to the river and lived Eastern from the Morava, which corresponds with the location of the stater and the mint weight.

⁷ Strabo. VII, 5, 2 (313).

Digitale Bilddatenbank von Münzen des belgischen Galliens

Hans NEUSSEL*

Vorgestellt wurden ausgewählte Exemplare von Keltenmünzen des belgischen Galliens aus Mainzer Privatsammlungen, in der Mehrzahl Münzen der Ambianer. Dabei fand eine auf einem PC (AT 386-DX mit Tseng 4000 Graphikkarte) installierte digitale Bilddatenbank Anwendung, deren Echtfarb-Bilder (True Colour Images) mit Hilfe der Screen-Machine (FAST, München) erstellt waren. Die eigene Software ermöglicht es, mit einer S-VHS Videokamera in einer Stunde etwa 80 Münzaufnahmen anzufertigen. Die Bilder sind in wenigen Sekunden von der Festplatte abrufbar und können bildschirmfüllend auf einem VGA-Monitor dargestellt werden.

Korrosionsbedingte Artefakte auf Münzen lassen sich bei digitalen Farbbildern weitaus besser abgrenzen als bei den herkömmlichen Schwarz-Weiß-Photos. Die praktischen Anwendungsmöglichkeiten einer solchen auf innovativen Techniken basierenden Bilddatenbank, die effizient, bedienerfreundlich und noch dazu gegenüber herkömmlichen Methoden preisgünstig ist, liegen auf der Hand.

Die Übertragung der mittels der JPEG-Algorithmen 1:10 komprimierten digitalen Bilder im ISDN Netz erfordert nach eigenen Erfahrungen nur 3 Sekunden. Die Aktualisierung von digitalen Sylloge Bilddatenbanken ist basierend auf dieser Kommunikationsmethode somit jederzeit möglich.

Eine solche digitale Bilddatenbank, in die auch alle bereits vorhandenen Dias mit aufgenommen werden können, wird jedem Hochschullehrer bald zum unentbehrlichen didaktischen Hilfsmittel für den Unterricht in kleinen Gruppen. Inzwischen preiswert gewordene Projektoren ermöglichen auch die Verwendung des digitalen Bildmaterials bei Vorlesungen im Hörsaal.

Für anspruchsvoll gestaltete Ausstellungsprojekte sind digitale Münzbilder ebenfalls hervorragend geeignet. Die künstlerischen und propagandistischen Aussagen auf Münzen werden erst auf dem Monitor bei entsprechender Vergrößerung deutlich erkennbar. Zudem können begleitende Texte in hervorragender Schriftqualität leicht erstellt werden. Eine solche Präsentation ist oftmals bei umfangreichem Ausstellungsmaterial auch im Hinblick auf eine notwendige Platzersparnis unverzichtbar. Ein weiterer wichtiger Gesichtspunkt ist die Möglichkeit der Interaktion mit dem Ausstellungsbesucher.



Nicht zuletzt kann eine solche Bilddatenbank auch dazu dienen, dem Wissenschaftler Münzen aus Privatsammlungen zugänglich zu machen. Die abgebildete Bronzemünze der Ambianer vom Typ *Le bronze Oxford, Heberden Coin Room* aus der eigenen Sammlung ist bisher erst in einem Exemplar bekannt gewesen (Scheers 75.

* Mainz.

pl. XIV, 381). Sie sei ebenso wie die den Vellocasses zugeschriebene Bronzemünze vom Typ *Les monnaies au personnage courant* (vgl. Scheers 163, pl. XX-XXI, 568-610) als Beispiel für keltische Prägungen in Privatsammlungen angeführt, die der interessierten Öffentlichkeit zugänglich gemacht werden sollten. Solche seltene Exemplare sind für vergleichende wissenschaftliche Studien unenbehrlich und sollten nicht in dem Dunkel von Banksafes verborgen bleiben.

Es wurde vorgeschlagen, im Rahmen einer Pilotstudie das von S. Scheers gesammelte wertvolle Material keltischer Münzen des belgischen Galliens durch eine ständig aktualisierte digitale Bilddatenbank zu ergänzen, die im ISDN Netz übertragen werden kann und nach Möglichkeit auch als CD erhältlich sein sollte. An diesem Projekt interessierte Numismatiker werden um eine Kontaktaufnahme mit dem Kongreßsekretariat gebeten.



Consideraciones sobre la presencia de acuñaciones celtibéricas en zonas mineras de la Hispania Ulterior

Paloma OTERO MORAN*

La singularidad de las áreas mineras ha sido ampliamente reconocida en estudios de todo tipo, aunque habitualmente los trabajos se refieren al período imperial. En lo que concierne a la Península Ibérica, la Arqueología ha empezado ya a centrarse en la etapa republicana, revelando la existencia de explotaciones de importancia cuya organización interna constituye el primer estadio de lo que luego serán los grandes centros mineros imperiales. En el estado actual de la investigación, la Numismática se revela, ante la escasez de otras fuentes, esencial para el conocimiento de la actividad humana en las minas¹.

El volumen de material conocido no es grande, pero sí significativo a la hora de aproximarse a problemas aún complejos como la presencia constante en los centros mineros de ciertos valores, la determinación de sus focos de alimentación y, sobre todo, la posibilidad de que éstos reflejen movimientos de población. Es en este último aspecto, y concretamente en la Celtiberia, en el que se centra este trabajo².

Las piezas utilizadas proceden tanto de excavaciones como de hallazgos casuales realizados en Sierra Morena, en los que están representados no sólo cecas cercanas y presumiblemente relacionadas con la explotación de los recursos, sino centros del N y NE de la Península y especialmente del área celtibérica, algunos de ellos próximos también a zonas dedicadas a la extracción o transformación de mineral. La mayor parte pertenece a tres minas que consideramos representativas por sus circunstancias y situación, y que han sido objeto de excavaciones arqueológicas, si bien en distinto grado: Diógenes (Ciudad Real) y el Cerro del Plomo, una de las zonas de habitación y trabajo de la mina El Centenillo (Jaén), ambas excavadas por C. Domergue³; y La Loba (Fuenteovejuna (Córdoba)), en la que se han desarrollado varias campañas dirigidas por J.M. Blázquez, cuyos resultados están a punto de publicarse⁴.

I. El material

1a. Diógenes

Situada en la vertiente N de Sierra Morena, C. Domergue fecha la explotación republicana entre fines del siglo II y mediados del I a.C.⁵. La excavación proporciona al menos un contexto para los hallazgos monetales, recogidos por el excavador entre los

* Museo Arqueológico Nacional, Madrid.

1 F. CHAVES TRISTAN, *Aspectos de la circulación monetaria de dos cuencas mineras andaluzas: Riotinto y Cástulo (Sierra Morena)*, en *Habis*, 18-19, 1987-1988, p. 613-637; M.P. GARCÍA-BELLIDO, *Nuevos documentos sobre minería y agricultura en Hispania*, en *ArchEspArq*, 59, 1986, p. 13-46; ID., *Las monedas de Cástulo con escritura indígena*, Madrid, 1982; F.J. SÁNCHEZ PALENCIA, *Explotación del oro en la Hispania Romana: sus inicios y precedentes*, en *Minería y metalurgia en las antiguas civilizaciones mediterráneas y europeas*, II, Madrid, 1989, p. 35-53.

2 Hemos seguido la definición de la Celtiberia generalmente aceptada, según la cual comprende la zona Oeste de las provincias de Zaragoza y Teruel, la Este de Guadalajara, Soria y Rioja y, posiblemente, la parte Norte de Cuenca: F. BURILLO, *Sobre el origen de los Celtiberos*, en *I Simposium sobre los Celtiberos*, Zaragoza, 1987, p. 76-78. No hemos excluido la Celtiberia Ulterior por carecer de datos suficientes para detectar comportamientos distintos en ambas áreas.

3 C. DOMERGUE, *La mine antique de Diógenes (province de Ciudad Real)*, en *Mélanges de la Casa de Velázquez*, III, 1967, p. 29-81; ID., *El Cerro del Plomo, mina «El Centenillo» (Jaén)*, en *Noticiario Arqueológico Hispánico*, 16, 1971, p. 265-357.

4 Agradecemos a F. Chaves su amabilidad al proporcionarnos los datos necesarios para este estudio.

5 C. DOMERGUE, *Diógenes...*, p. 31-34.

vecinos del pueblo actual, construido sobre el asentamiento republicano. Diógenes I (Fig. 1) ha proporcionado 39 monedas hispánicas⁶, procedentes tanto de la Ulterior – Cástulo y Obulco – como de la Citerior, en porcentajes bastante igualados. Además del 20 % de monedas de Kese, una décima parte pertenece a un variado grupo de cecas del Norte – Sekaisa, Iltirkesken, Iltirta, Kelse, Untikesken, Metuainum y Titiakos – situadas en la costa comercial del Nordeste, el valle del Ebro y la Celiberia. El material abarca desde fines del siglo III hasta los años centrales del I a.C.

| CECAS | AR | AE | | | | Total | % | Total grupo |
|------------------|------|-------|-------|-------|--------|-------|-------|-------------|
| | | Duplo | As | Semis | Indet. | | | |
| Ulterior : | | | | | | | | |
| Cástulo | | 11 | 2 | 1 | | 14 | 31,11 | 44,40 |
| Obulco | | | 6 | | | 6 | 13,33 | |
| Nordeste : | | | | | | | | |
| Kese | | | 9 | | | 9 | 20,00 | 26,60 |
| Iltirkesken | | | 1 | | | 1 | 2,22 | |
| Iltirta | | | 1 | | | 1 | 2,22 | |
| Untikesken | | | | 1 | | 1 | 2,22 | |
| Valle del Ebro : | | | | | | | | |
| Kelse | | | 1 | | | 1 | 2,22 | 2,22 |
| Celtiberia : | | | | | | | | |
| Metuainum | | | 1 | | | 1 | 2,22 | 8,88 |
| Sekaisa | | | 2 | | | 2 | 2,22 | |
| Titiakos | | | 1 | | | 1 | 2,22 | |
| Ibéricas indet. | | | 2 | | | 2 | 4,44 | 4,44 |
| Roma | 2 | | 4 | | | 6 | 13,33 | 13,33 |
| Totales | 2 | | 30 | 2 | | 45 | | |
| % | 4,44 | | 66,66 | 4,44 | | | | |

Fig. 1. Diógenes

Hay, sin embargo, algunos detalles que sugieren una fecha para el comienzo de la explotación algo anterior a la propuesta por Domergue. El grueso del numerario pertenece a emisiones de la segunda mitad del siglo II a.C. – todas las piezas de Kese excepto una, las de las cecas del Nordeste y del valle del Ebro, Obulco y la mayoría de Cástulo – y aparecen también emisiones más antiguas – los cuatro duplos de Cástulo, las monedas romanas y una de Kese – en general con alto grado de desgaste. El contexto cerámico no permite pronunciarse, pero tampoco descartar la hipótesis. Los valores utilizados presentan también aspectos peculiares. Hay, como en el resto de las zonas mineras, una clara preferencia por los ases, pero el porcentaje de divisores es ínfimo y hay una presencia significativa de bronce pesados : duplos de Cástulo, ases republicanos y ases hispánicos entre 14/15 y 20 g. Esto hace pensar en un período algo más antiguo que el resto de las minas estudiadas, en las que la presencia de valores grandes es muy pequeña o inexistente.

Otros aspectos parecen apoyar esta cronología. Ninguna de las monedas de Kese está contramarcada, y todas pertenecen a emisiones más antiguas que las que habitualmente lo están⁷. Es además el único caso en que aparecen piezas de su misma área geográfica, Untikesken, Iltirta e Iltirkesken, todas ellas emisiones de la segunda mitad del siglo II. Si habitualmente la presencia de monedas contramarcadas se asocia con algún tipo de relación entre la *societas* exploradora de la mina y la ciudad de Kese, aquí parece más plausible apelar, bien a una vínculo informal, bien a una emigración de

⁶ *Ibidem*, p. 55-61.

⁷ L. VILLARONGA, *Les mondes ibériques de Tarraco*, Tarragona, 1983, p. 32-33.

mano de obra desde su área de influencia. A este respecto hay que mencionar la existencia de filones de galena argentífera en la región del Priorato, explotados en la Antigüedad sin que sea posible precisar el período exacto, así como el carácter comercial y de zona de paso que siempre tuvo el área del Ebro. Por otra parte, existe la posibilidad de que en cierta época Emporion/Untikesken actuara como centro de distribución de la plata ibérica hacia el mundo griego occidental, a través de Massalia⁸.

Es probable que se produjese, más que un cese abrupto de la explotación⁹, un lento abandono de la misma a lo largo del siglo, desde al menos la década de los setenta; esto justificaría la escasa presencia de acuñaciones del siglo I – Metuainum, Titiakos, Sekaisa – de series de la Celtiberia y del valle del Ebro, ante la menor necesidad de mano de obra, y el alto desgaste de la mayor parte del numerario, convertido en moneda residual ante la falta de dinero nuevo.

Ib. El Centenillo

Situada ya en la provincia de Jaén y más cercana a Cástulo, uno de sus poblados-fundición, el Cerro del Plomo, fue objeto de ocho catas que permitieron a Domergue diferenciar cuatro fases en la explotación, cuya etapa republicana abarca también desde fines del siglo II hasta mediados del I a.C.¹⁰. Estos cortes estratigráficos proporcionan información sobre el uso habitual de moneda en zonas de habitación y trabajo, así como una cronología básica de utilización de la misma, imposible de incluir aquí, pero no sirven para distinguir períodos en cuanto a la alimentación de la mina. Otros puntos sólo han sido prospectados – La Fabriquilla – o fueron objeto de excavaciones antiguas nunca publicadas, como las de Sandars en La Tejeruela. Estos centros responden al mismo patrón de asentamiento: fundiciones rodeadas por sus respectivos poblados, a cierta distancia unos de otros, en torno al filón de mineral.

La procedencia de las piezas, 26, es similar a la observada en Diógenes, pero las cecas representadas son sólo tres, además de un ejemplar identificado como una acuñación específicamente minera¹¹ (Fig. 2).

También aquí dominan Cástulo y especialmente Kese, que alcanza más del 50 % de la moneda en circulación, estando todas las piezas contramarcadas con las letras SC. El resto del numerario se reduce a un ejemplar de Sekaisa, otro frustrado pero presumiblemente también ibérico, y la moneda minera. El material es imposible de clasificar en la mayoría de los casos, aunque las piezas de Kese parecen pertenecer a series de la segunda mitad del siglo II. Si se acepta la teoría según la cual estas monedas contramarcadas vienen a ocupar el vacío dejado por las emisiones castulonenses destinadas a las minas¹², la ausencia de piezas de Cástulo fuera del Cerro del Plomo y la aparición de ejemplares contramarcados en otros puntos de El Centenillo podría estar relacionada con una mayor antigüedad del asentamiento del Cerro y una expansión en la explotación al menos desde principios del siglo I. Con todo, el volumen de material conocido y la falta de excavaciones sistemáticas no permiten extraer conclusiones.

⁸ C. DOMERGUE, *Les mines de la Péninsule Ibérique dans l'Antiquité Romaine*, Roma, 1990, p. 64 y 183, 162.

⁹ C. Domergue sitúa el abandono de la mina en las guerras civiles de mediados del siglo; M.P. GARCÍA-BELLIDO, *Cástulo*, p. 114, se inclina por adelantarlo a las guerras sertorianas.

¹⁰ C. DOMERGUE, *El Cerro del Plomo...*, p. 338-346.

¹¹ M.P. GARCÍA-BELLIDO, *A propósito de una moneda minera aparecida en Sierra Morena*, en *II Simposi Numismàtic de Barcelona*, Barcelona, 1980, p. 199 ss.; ID., *Nuevos documentos...*, p. 14-15.

¹² ID., *Cástulo...*, p. 109-110.

| CECAS | AE | | | | | Total | % |
|----------------|----|-------|-------|-------|--------|-------|-------|
| | AR | Duplo | As | Semis | Indet. | | |
| Cástulo | | | 9 | | | 9 | 34,61 |
| Kese | | | 8 | 6 | | 14 | 53,84 |
| Sekaisa | | | 1 | | | 1 | 3,84 |
| Emisión minera | | | | 1 (?) | | 1 | 3,84 |
| Ibérica indet. | | | 1 | | | 1 | 3,84 |
| Totales | | | 19 | 7 | | 26 | |
| % | | | 73,07 | 26,92 | | | |

Fig. 2. El Centenillo

Se observa, en relación con Diógenes – y aún más si se compara con La Loba – una menor variedad en las fuentes de alimentación de la mina. La mano de obra debió ser relativamente estable, procediendo los nuevos aportes, en su mayoría, de otras minas de la misma región. Por otra parte, los ases siguen siendo el valor predominante, pero aumenta considerablemente la presencia de semises, todos ellos de Kese. El hecho de hallarse en un lugar de difícil acceso, unido a la inexistencia de recursos económicos como la agricultura y a la imposibilidad de confiar en otros medios de intercambio, pudo tener como consecuencia la organización del hábitat minero como un centro independiente, al menos en lo que a numerario se refiere. La *societas castulonensis*, explotadora de la mina¹³, se ocuparía de proveer a la población de moneda, ante la falta de alimentación espontánea, con las piezas de Kese contramarcadas; debió prever la necesidad de moneda fraccionaria y trajo no sólo ases, sino piezas más pequeñas, necesarias para la vida diaria de una población que no podía pagar sus gastos más que en metálico.

1c. La Loba

Las excavaciones en La Loba, en la zona occidental de Sierra Morena, han proporcionado un abundante material numismático – 76 monedas y una *tessera* de plomo – que destaca por su variedad (Fig. 3). La publicación de las campañas está en prensa y por ello desconocemos la estratigrafía y el contexto, pero sin duda el estudio completo del yacimiento aportará numerosos datos al panorama de las minas de la Bética. El período de explotación republicana parece ser el mismo que el de los casos anteriores¹⁴.

Trece cecas se reparten el numerario en circulación, además de ocho piezas inclasificables pero que, en cualquier caso, pertenecen a cecas de la Citerior. Más de la mitad está suministrado por ciudades del Sur; sin embargo hay un 38 % que viene del Norte, la mayoría de la Celtiberia, sin que haya ningún ejemplar de Kese ni de cecas del Nordeste. Finalmente, una pequeña parte corresponde a denarios romanos.

Las cercanas ciudades de Cástulo y Obulco son las cecas con más moneda en circulación en la mina. De las 25 piezas castulonenses, la mayoría pertenece a la serie considerada minera por García-Bellido¹⁵. Hay, además, un ejemplar de Ilipa y dos de Ulia. Todas ellas están muy desgastadas y pertenecen a emisiones de la segunda mitad del

¹³ El estado de la cuestión queda resumido en M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, p. 19-22 y C. DOMERGUE, *Les mines...*, p. 261-263, exponentes de diferentes interpretaciones en cuanto al carácter de las *societates* y de otros objetos marcados como los sellos de plomo.

¹⁴ C. DOMERGUE, *Les mines...*, p. 355-356 y 360, hace algunos comentarios sobre el material y estructura del poblado; M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, p. 36-37, comenta brevemente el material aparecido hasta la fecha de publicación.

¹⁵ Serie VIa, fechada entre el 165 y 80 a.C. : M.P. GARCÍA-BELLIDO, *Cástulo...*, p. 145-146, 206-210.

siglo II, excepto un duplo de Cástulo de finales del siglo III. El otro foco de alimentación, la Citerior, se divide entre ocho cecas, pertenecientes tanto a la zona ibérica del valle del Ebro como a la Celtiberia, si bien la mayor parte de las monedas proceden de ésta última. Hay ases de Arekorata, Sekaisa, Tabaniu, Titiakos, Bolskan, Sekia y Titum en torno al período sertoriano, y un as de Kelse de la segunda mitad del siglo II, la única emisión de la Citerior anterior al siglo I. Conviene recordar sin embargo la ausencia, por el momento, de estudios particulares sobre las cecas celtibéricas, que en un futuro podrían reconsiderar las cronologías tradicionales. En cuanto a los valores, la preferencia por el as es evidente. Existen divisores, pero son muy pocos, sólo 4 ejemplares; pudo influir el que las cecas celtibéricas acuñaran poca moneda fraccionaria.

| CECAS | AE | | | | | Total | % | Total grupo |
|------------------|------|-------|-------|-------|--------|-------|-------|-------------|
| | AR | Duplo | As | Semis | Indet. | | | |
| Ulterior : | | | | | | | | |
| Cástulo | | 1 | 21 | 3 | | 25 | 32,89 | 57,88 |
| Obulco | | | 15 | 1 (?) | | 16 | 21,05 | |
| Ilipa | | | 1 | | | 1 | 1,31 | |
| Ulía | | | 2 | | | 2 | 2,63 | |
| Valle del Ebro : | | | | | | | | |
| Bolskan | | | 1 | | | 1 | 1,31 | 6,56 |
| Kelse | | | 1 | | | 1 | 1,31 | |
| Sekia | | | 2 | | | 2 | 2,63 | |
| Titum | | | 1 | | | 1 | 1,31 | |
| Celtiberia : | | | | | | | | |
| Arekorata | | | 8 | | | 8 | 10,52 | 21,03 |
| Sekaisa | | | 6 | | | 6 | 7,89 | |
| Tabaniu | | | 1 | | | 1 | 1,31 | |
| Titiakos | | | 1 | | | 1 | 1,31 | |
| Ibéricas indet. | | | 8 | | | 8 | 10,52 | 10,52 |
| Roma | 3 | | | | | 3 | 3,94 | 3,94 |
| Totales | 3 | 1 | 68 | 4 | | 76 | | |
| % | 3,94 | 1,31 | 89,47 | 5,26 | | | | |

Fig. 3. La Loba

Parece, pues, que la población de La Loba utilizaba un número importante de monedas del siglo II de cecas cercanas a la mina, muy desgastadas ya por el uso, junto con un conjunto de muy variada procedencia llegado, en su mayoría, después de la década de los 70. Este fenómeno refleja muy probablemente que parte de los trabajadores de la mina procedían de la Citerior, y sobre todo de la Celtiberia, y que La Loba, como Diógenes y a diferencia de El Centenillo, dependió en gran parte de la emigración de mano de obra de otras regiones. Por otra parte, la ausencia de cualquier tipo de material contramarcado sugiere una política de empresa diferente; en el plano numismático, el corte de alimentación que supone el no hallar ninguna pieza de Cástulo ni Obulco posterior a la década de los 80 – y que en El Centenillo se subsanó con las monedas contramarcadas de Kese – aquí parece haberse solucionado de un modo natural, gracias al dinero aportado por la mano de obra llegada desde otras regiones y a la circulación residual de las series anteriores.

Id. Minas del Suroeste

De las minas de Huelva, explotadas intensivamente en época imperial, conocemos algunas monedas procedentes de colecciones particulares que muestran, pese a su pequeño número, el funcionamiento de la mina durante la República – claro en el caso de Sotiel – o la persistencia en la circulación, ya en el siglo I d.C., de bronce de época republicana entre la población minera.

En Sotiel Coronada (Valverde del Camino, Huelva), de 40 monedas 4 son emisiones indígenas, todas de la Citerior : 2 de Bolskan – un denario y un as –, un as de Sekaisa y un denario de Baskunes, de época sertoriana; excepto el denario de Bolskan, están bastante desgastadas. Otras 14 son emisiones hispano-latinas anteriores al cambio de siglo, gran parte de ellas acuñadas también por ciudades del Norte como Bilbilis, Caesaraugusta o Celsa, además de Cartago Nova, más cercana. Estas, junto a las acuñaciones de época de Augusto, Tiberio y Caligula – Bilbilis, Caesaraugusta, Calagurris, Cascantum, Clunia, Ercavica, Segobriga y Turiaso, Cartago Nova e Illici – demuestran que se mantuvieron los aportes monetarios y de mano de obra del período anterior, más otros procedentes de la zona suoriental, probablemente población que anteriormente había trabajado en las cerradas minas de Cartago Nova. A estos datos hay que añadir los aportados por F. Chaves, que, basándose en una muestra mucho más amplia, señala un 10 % de monedas procedentes de la Citerior para la época republicana¹⁶.

De otra zona minera de Huelva, Cala, al Norte de la provincia, se conoce un as de Sekaisa inclasificable por su grado de desgaste.

II. El movimiento de mano de obra en las minas republicanas : el caso de la Celtiberia

La concentración de moneda en los asentamientos mineros ilustra el carácter especial de la vida que se desarrollaba en ellos, cerrada, en ciertos casos aislada del exterior, y sin embargo dependiente de él para su supervivencia. La casi exclusiva circulación de bronce, moneda de uso diario, indica una economía monetaria muy desarrollada para la época, mucho más que en ambientes rurales – aunque parece que en ciertas explotaciones agrícolas pudo tomarse como modelo – e incluso urbanos¹⁷. La reglamentación de Vipasca, por su raíz helenística, puede dar una idea de lo que pudo ser la vida en estos poblados, en la mayoría de los cuales la única manera de pagar los gastos cotidianos y los servicios necesarios era en metálico¹⁸. Por ello los hábitats mineros se constituyen como ámbitos cerrados que tienden a absorber moneda y a retenerla, utilizándola mucho tiempo después de que pierda su valor legal, convertida en moneda puramente fiduciaria. Si no se tiene, se busca o se produce, y de ahí la presencia de monedas contramarcadas y también de imitaciones y *tesserae* de todo tipo que frecuentemente circulan junto a piezas de curso legal¹⁹.

Las pérdidas monetales reflejan la existencia de una población considerable, confirmada por las aún escasas excavaciones o prospecciones que se han llevado a cabo hasta el momento²⁰. Las minas de Sierra Morena se caracterizan por aglutinar en torno a los filones una serie de poblados de distinto tamaño, pero cuya organización, muy parecida en todos ellos – basada en la yuxtaposición de las áreas de vivienda y trabajo, con los almacenes, hornos, lavaderos muy próximos a las casas – está enfocada a conseguir el máximo rendimiento y eficacia en el trabajo, aún sacrificando la salud de sus habitantes. Hubo al menos un poblado por mina, pero en las grandes, como El Centenillo, había varios asentamientos distribuidos en torno al filón; la organización urbanística del poblado del Cerro del Plomo, que requirió obras de envergadura para convertir la colina en un lugar apropiado – muros de contención, plataformas para las instalaciones industriales y para las viviendas – indica la existencia de una dirección fuerte y potente, que además repartía a sus trabajadores en distintos puntos según las

¹⁶ F. CHAVES, *Aspectos...*, p. 621.

¹⁷ M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, p. 28-34; F. CHAVES, *Aspectos...*, p. 615-619.

¹⁸ C. DOMERGUE, *La mine antique d'Aljustrel*, París, 1983; M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, p. 27, presenta lo que parece ser una *tessera* para compra o arreglo de calzado.

¹⁹ F. CHAVES, *Hallazgo de monedas en Riotinto (Huelva)*, en *Estudios en homenaje al Dr. Antonio Beltrán Martínez*, Zaragoza, 1986, p. 863-872, en donde la mayoría de las piezas son imitaciones de las series más tardías de Cástulo acuñadas casi con seguridad en la propia mina; M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, *passim*.

²⁰ C. DOMERGUE, *Les mines...*, p. 358-360.

necesidades de la explotación : además de los tres ya mencionados se conocen restos de hábitat dispersos por toda la zona²¹. El caso del poblado de La Loba es muy ilustrativo. Ubicado también en un cerro que dominaba una zona con una docena de minas en actividad, la distribución de las viviendas, situadas en una de las vertientes, recuerda mucho al parecer a los pueblos mineros que empezaron a construirse a fines del siglo XIX. Es interesante mencionar el estudio demográfico hecho sobre el castro de Villasviejas del Tamuja, junto a Botija (Cáceres), que tiene grandes similitudes con los centros de Sierra Morena pese a pertenecer a una cuenca minera distinta. Este lugar presenta todas las características de ser un asentamiento típicamente minero al menos en su última etapa de vida, fechada por los excavadores entre mediados del siglo II y mediados del I a.C. Tiene una extensión de 6,71 ha, 67.095 m², y consta de dos recintos delimitados por una muralla de los que al menos uno es con seguridad área de viviendas. El estudio se basa en la zona central del recinto A, por ser la excavada en mayor extensión, y calcula una población de tamaño medio, entre 2.140 y 2.175 habitantes, de 320 a 400 habitantes por Ha²².

La existencia de un número tan considerable de asentamientos y el tamaño de algunos de ellos tuvo que traer consigo movimientos de población importantes que generalmente se consideran imposibles de calibrar por la ausencia de fuentes epigráficas. Sin embargo los hallazgos de bronce, al ser monedas que viajan con los individuos y no con el comercio, son también una fuente de información sobre la procedencia de los trabajadores de las minas, al menos sobre su región de origen. Es curioso observar que la composición, en cuanto a cecas, del numerario circulante tiene grandes similitudes en todas las explotaciones mineras, y no sólo en los casos aquí mencionados u otros de su misma área geográfica; algo más tarde, en los filones del Noroeste se repite la aparición de acuñaciones de Cástulo – cuyas monedas llegaron hasta la región minera de Graçac, en la actual Croacia²³ – del Valle del Ebro y la Celtiberia, junto a otras de Cartago Nova, es decir, de una región cuya economía se basó en gran parte y durante mucho tiempo en la explotación de las minas de plata. Todo parece indicar que hubo un movimiento fluido, continuo en el tiempo, de trabajadores entre las distintas zonas mineras de Hispania, hecho que no debe sorprender teniendo en cuenta que muchos de los trabajos propios de una explotación de mineral requieren mano de obra especializada y experimentada.

Poco a poco se va abandonando la idea de una mano de obra casi exclusivamente servil en favor de un panorama más complejo. Aunque el status de esclavo no es incompatible con el uso del dinero, hoy se admite que es muy probable que, como después en la época imperial, gran parte de los trabajadores fueran libres y asalariados²⁴. Sin duda la mano de obra contratada era más rentable para las empresa o los particulares que la compra y manutención de grupos importantes de esclavos que, además, no podían hacer frente a muchos de los trabajos de una explotación minera por falta de preparación. S. Mrozek revisa en un estudio reciente²⁵ las condiciones sociales y económicas que se dieron a partir del siglo II y que posiblemente influyeron en la disponibilidad de trabajadores libres y en que el Estado estuviese inclinado a utilizarla. Pueden resumirse, por un lado, en la existencia de lo que el autor llama una «libertad social», que contribuyese a la aparición de grupos de personas sin trabajo en sus lugares de origen, no absorbidos por la agricultura y dispuestos a aceptar desplazamientos y riesgos; y por otra, en una necesidad acuciante de mano de obra. Sus conclusiones se centran en el período

21 ID., *El Cerro del Plomo...*, *passim*.

22 F. HERNÁNDEZ, D. RODRÍGUEZ, M.A. SÁNCHEZ, *Excavaciones en el castro de Villaviejas del Tamuja (Botija, Cáceres)*, Mérida, 1989. Actualmente estamos preparando un estudio sobre la circulación monetaria en esta zona.

23 M.P. GARCÍA-BELLIDO, *Cástulo...*, p. 137-139.

24 P.A. BRUNT, *Free Labour and Public Works at Rome*, en *JRS*, 70, 1980, p. 82-100; M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, p. 38-40; S. MROZEK, *Aspects sociaux et administratifs des mines d'or en Dacie*, en *Apulum*, 7/1, 1968, p. 307-326.

25 S. MROZEK, *Le travail des hommes libres dans les mines romaines*, en *Minería y metalurgia en las antiguas civilizaciones mediterráneas y europeas*, II, Madrid, 1989, p. 163-170.

imperial, pero no excluye que al menos algunas de ellas puedan aplicarse a momentos anteriores; precisamente la situación en los dos primeros siglos anteriores a la Era es, en muchos aspectos, muy similar.

La cantidad de monedas perdidas acuñadas en la Citerior (Fig. 4), la mitad del numerario en circulación, indica que hubo desplazamientos de personas desde las regiones del Norte hacia las cuencas mineras del Sur. Tres son los focos de procedencia a los que pueden reducirse las piezas halladas: la zona comercial del Nordeste – 20,61 %, el porcentaje más alto a causa de la presencia de Kese – el valle del Ebro – 8,11 % – y la Celtiberia – 16,85 % – algunas de cuyas ciudades son citadas por las fuentes clásicas como centros destacados de la industria del metal. El denominador común de la mayoría de las cecas representadas parece ser estar relacionadas, directa o indirectamente, con ámbitos o intereses mineros. Por Sierra Morena circularon acuñaciones de siete ciudades celtibéricas; son, por orden de importancia, Sekaisa (Poyo de Mara/Durón de Belmonte, Zaragoza), con un 8,12 %; Arekorata (Agreda, Soria), con el 5 %; Titiakos (Atienza, Guadalupe), con un 1,25 %; y con igual porcentaje, 0,62 %, Bilbilis (Valdeherrera, Calatayud, Zaragoza), Tabaniu (Débenos, Soria), Ekualakos (probablemente en el área del Alto Duero) y Metuainum, sin ubicación conocida.

El estudio de la minería celtibérica está aún en sus inicios²⁶, pero parece que se concentró principalmente en la explotación del hierro de dos puntos del Sistema Ibérico: el Moncayo, conocido indirectamente por las alusiones de las fuentes a la forja de Bilbilis y Turiasu²⁷, y Sierra Menera, en donde se han detectado recintos de características defensivas pero con escombros de grandes dimensiones, interpretados en principio como partes integrantes del sistema de control de la explotación minera²⁸. En el área del Moncayo, que habría que vincular por su proximidad a las ciudades de Bilbilis, Sekaisa, Arekorata y Tabaniu, sólo se conocen datos sobre un asentamiento minero, La Oruña; ha proporcionado niveles del siglo I a.C. y un horno de fundición, pero únicamente una moneda, un denario de la cercana Turiasu al parecer en buen estado de conservación²⁹. Sin embargo, las prospecciones geológicas han detectado también algunas mineralizaciones de plata, de las que al menos una – Valdeplata – fue explotada en la Antigüedad³⁰. No es improbable que ciudades como Arekorata, Sekaisa y Turiasu, que tuvieron sin duda una población considerable y cierta categoría – como indica el que acuñaran plata y que la segunda tuviese que ampliar su recinto defensivo en el año 154 – jugaran un papel similar al de Cástulo en el Sur, como centralizadoras de la actividad minera del Sistema Ibérico³¹. El alto nivel técnico demostrado en la transformación del metal implica una industria extractiva desarrollada; todo ello tuvo que hacer de los celtiberos dedicados a esta actividad una mano de obra especializada y bien recibida en las minas de otras regiones de la Península.

26 J.A. HERNÁNDEZ VERA, J.J. MURILLO, *Aproximación al estudio de la metalurgia celtibérica del Moncayo*, en *Caesaraugusta*, 61-62, 1985, p. 177-190; ID., *La metalurgia celtibérica: proyecto de investigación*, en *Estudios en homenaje...*, p. 453-461.

27 Marcial, I, 49, 3; IV, 55, 12; XII, 18, 9; XIV, 33; Justino, XLIV, 3, 8; Plinio, I, 34; XXXIV, 144; Diodoro, V, 33; Filón, *Mech.*, IV, 46.

28 F. BURILLO y otros, *El poblamiento en el valle del Ebro y Sistema Ibérico*, ponencia al III Simposio sobre los Celtiberos (Daroca, Zaragoza, octubre de 1991), en prensa.

29 I.J. BONA, J.A. HERNÁNDEZ VERA, *La Oruña (Vera de Moncayo)*, *El Moncayo: diez años de investigación arqueológica*, Taragona, 1989, p. 54-57; J.J. BIENES CALVO, J.A. GARCÍA SERRANO, *Avance a las primeras campañas de excavación en La Oruña (Vera de Moncayo, Zaragoza)*, comunicación al III Simposio sobre los Celtiberos, en prensa.

30 J.M. MARTÍN-VIVALDI, E. ARAGONÉS, *El potencial minero del Moncayo*, en *I Encuentro Nacional de Estudios sobre El Moncayo. Ciencias de la Naturaleza, Turiaso*, IX, 1989, vol. I, p. 71-89.

31 F. BURILLO, M. OSTALÉ, *Sobre la situación de las ciudades celtibéricas Bilbilis y Segeda*, en *Kalathos*, 3-4, 1984, p. 305-309; F. BURILLO, *Sobre el territorio de los lusones, belos y titos en el siglo II a.C.*, en *Estudios en homenaje...*, p. 540-543; M.P. GARCÍA-BELLIDO, *Nuevos documentos...*, p. 19.

| CECAS | AE | | | | | Total | % | Total grupo |
|------------------|------|-------|-------|-------|--------|-------|-------|-------------|
| | AR | Duplo | As | Semis | Indet. | | | |
| Ulterior : | | | | | | | | |
| Cástulo | | 12 | 32 | 4 | | 48 | 30,00 | 45,62 |
| Obulco | | | 22 | | | 22 | 13,75 | |
| Ilipa | | | 1 | | | 1 | 0,62 | |
| Ulia | | | 2 | | | 2 | 1,25 | |
| Mineras | | | | 1 | | 1 | 0,62 | 0,62 |
| Nordeste : | | | | | | | | |
| Kese | | | 12 | 7 | 11 | 30 | 18,75 | 20,61 |
| Iltirkesken | | | 1 | | | 1 | 0,62 | |
| Iltirta | | | 1 | | | 1 | 0,62 | |
| Untikesken | | | | 1 | | 1 | 0,62 | |
| Valle del Ebro : | | | | | | | | |
| Baskunes | 1 | | | | | 1 | 0,62 | 8,11 |
| Bolskan | 1 | | 3 | | | 4 | 2,50 | |
| Kelse | | | 5 | | | 5 | 3,12 | |
| Sekia | | | 2 | | | 2 | 1,25 | |
| Titum | | | 1 | | | 1 | 0,62 | |
| Celtiberia : | | | | | | | | |
| Arekorata | | | 8 | | | 8 | 5,00 | 16,85 |
| Bilbilis | | | 1 | | | 1 | 0,62 | |
| Ekualakos | | | 1 | | | 1 | 0,62 | |
| Metuainum | | | 1 | | | 1 | 0,62 | |
| Sekaia | | | 13 | | | 13 | 8,12 | |
| Tabaniu | | | 1 | | | 1 | 0,62 | |
| Titiakos | | | 2 | | | 2 | 1,25 | |
| Levante : | | | | | | | | |
| Arse | | | 1 | | | 1 | 0,62 | 1,24 |
| Kelin | | | 1 | | | 1 | 0,62 | |
| Ibéricas indet. | | | 11 | | | 11 | 6,87 | 6,87 |
| Totales | 2 | 12 | 122 | 13 | 11 | 160 | | |
| % | 1,25 | 7,5 | 76,25 | 8,12 | 6,87 | | | |

Fig. 4.

La relación entre la Celtiberia y la actual Andalucía no es un hecho aislado propio de la época republicana. Es frecuente encontrar en las necrópolis andaluzas elementos que muestran la existencia de contactos frecuentes entre ambas regiones al menos desde el siglo IV a.C.³². Del período imperial, y a pesar de la relativa escasez de las fuentes epigráficas en las minas hispánicas, se conocen inscripciones funerarias que aluden a celtíberos de Clunia y Nova Augusta desplazados a las explotaciones mineras del Sur³³. La cronología de las monedas indica que al menos a partir de la década de los 70 el movimiento de trabajadores desde la Celtiberia y, en sentido amplio, el valle del Ebro, fue continuo y fluido, sin que esto signifique que esta emigración no se produjese también antes de esta fecha. La mayoría de las cecas celtibéricas no comenzaron a acuñar hasta un momento avanzado del siglo II, así es que es más probable que los emigrantes de la segunda mitad de este siglo sólo llevaran las series del Nordeste y de Kelse del siglo II que encontramos principalmente en Diógenes, tal vez la explotación más antigua de las que conocemos, pero también en La Loba. En ninguna de estas minas se conocen, hasta ahora, monedas celtibéricas anteriores al cambio de siglo. Estos mismos trabajadores

³² D. VAQUERIZO, *Armas de hierro de raigambre meseteña en la necrópolis de Los Collados (Almedinilla, Córdoba)*, en *II Simposio sobre los Celtiberos*, Zaragoza, 1990, p. 225-229.

³³ C. DOMERGUE, *Les mines...*, p. 337-341; A. BLANCO FREIJEIRO, *Antigüedades de Riotinto*, en *Zephyrus*, 13, 1962, p. 43.

podrían ser los portadores de las piezas acuñadas en las ciudades de la zona ibérica del Ebro – cuya actividad minera, si la tuvieron, se desconoce de momento – pues circularon habitualmente junto con las celtibéricas.

Parece, pues, que la mano de obra procedente de la Celtiberia se dirigió tanto a las zonas orientales de Sierra Morena Diógenes – como a las occidentales – La Loba – tradicionalmente vinculadas a Cástulo, e incluso a la cuenca minera de Huelva, sin que de momento se pueda distinguir algún patrón de conducta en su distribución. Los hallazgos monetarios confirman, por lo tanto, la existencia de cierta relación entre las minas castulonenses y Sotiel Coronada, ya intuida por la utilización de técnicas de explotación similares a las de El Centenillo³⁴; sin embargo ésta es la que menos aportes celtibéricos registra. Desde luego la vinculación a Cástulo no implicaba la unidad en la administración de las minas, dirigidas por personas o *societates* con criterios diferentes. La mano de obra celtíbera parece haberse dirigido principalmente a La Loba y en menor medida a Diógenes, posiblemente por mantenerse su explotación a niveles muy bajos. En cambio, La Loba da una impresión distinta, de gran actividad y movimiento humano, muy en consonancia con los restos constructivos que se conservan.

Aunque no puede descartarse que los romanos trasladaran poblaciones enteras obligándolas a trabajar en las minas³⁵ – condición que no excluye que se les pagara – es posible que una parte importante de la mano de obra celtíbera fuera libre y asalariada. Precisamente la evolución histórica de la Celtiberia, inmersa en un proceso de cambio, era particularmente apropiada para crear situaciones que favoreciesen la aparición de grupos humanos dispuestos, por su situación económica y social, a desplazarse sin dificultad y a trabajar en condiciones frecuentemente difíciles. A las consecuencias de las sucesivas guerras libradas, con mayor o menor intensidad, en territorio celtibérico se unió la aceleración de la urbanización del territorio y la configuración de ciudades con categoría de polis, un proceso iniciado con anterioridad pero que sufrió un fuerte impulso a causa de la intervención romana³⁶. Sin duda hubo grupos desarraigados, sin recursos económicos, necesitados de trabajo y con conocimientos de minería, dispuestos a emigrar a las minas del Sur.

³⁴ C. DOMERGUE, *El Cerro...*, p. 314; F. CHAVES, *Aspectos...*, p. 621.

³⁵ S. MROZEK, *Le travail...*, p. 163; C. DOMERGUE, *Les mines...*, p. 346-348, con ejemplos referidos a las minas altoimperiales.

³⁶ F. BURILLO, *Aproximación diacrónica a las ciudades antiguas del valle medio del Ebro*, en *Congreso Peninsular de Historia Antigua*, Teruel, 1987, p. 3-27; J. RODRÍGUEZ BLANCO, *Relación campo-ciudad y organización social en la Celtiberia Ulterior (siglo II a.C.)*, en *Memorias de Historia Antigua*, I, 1977, p. 170 ss.; G. FATÁS, *La polis indígena. Notas metodológicas*, en *Homenaje a Tuñón de Lara*, Madrid, 1981, vol. 1, p. 31-43, y ID., *Romanos y celtiberos citeriores en el siglo I a.C.*, en *Caesaragusta*, 53-54, 1981, p. 195-234.

Le monete celtiche AR di tipo BIATEC. Raffronto con i denari repubblicani romani

Anna Elisabeth RIZ*

1. L'indagine sul rapporto tra i denari repubblicani romani e le monete AR di tipo BIATEC, coniate dalla popolazione celtica dei Boi dal 57 al 45 a.C. nel territorio dell'attuale città di Bratislava, rivela l'esistenza di una larga connessione fra le due monetazioni.

2. All'inizio del quarto secolo a.C. una parte dei Boi si era trasferita dalla Gallia nell'odierna Emilia, fondando la capitale Bononia. Dopo la loro sconfitta a Mutina nel 191 a.C., essi si stabilirono nella Boemia centrale e nord occidentale, nel cui capoluogo Stradonitz coniarono gli stateri d'oro del tipo di Atena-Alkis con le loro suddivisioni e, durante il primo terzo del primo secolo a.C., lo statere d'oro «Rolltier», prototipo delle scodelline dell'arcobaleno e degli stateri AV a conchiglia, i più recenti dei quali recano la leggenda BIATEC.

Invasi dai Cimbri, il maggior numero dei Boi si spostò nel 60 a.C. verso sud-est, occupando i territori della Pannonia, i paesi odierni dell'Austria Inferiore, il Burgenland meridionale, la Slovacchia sud-occidentale e l'Ungheria nord-occidentale, dove venne riconiato lo statere AV a conchiglia, le cui suddivisioni recano la leggenda BIAT.

Verso il 58 a.C., come riferisce Cesare, BG, I, 5, 4, si verificò l'invasione di una parte dei Boi nel territorio norico, assediando Noreia. Fallito l'assalto, essi si unirono agli Elvezi, trasferendosi nella Gallia centrale. Dopo essere stati vinti da Cesare a Bibracte, si stabilirono nei territori degli Edui con la capitale Gorgobina, mantenendo vivi contatti con i Boi della Pannonia.

3. Verso la metà del primo secolo a.C. vigeva presso quasi tutte le stirpi celtiche l'oligarchia dei cavalieri. Questi alti funzionari civili e militari disponevano di *oppida* e rimanevano in carica per un breve periodo (uno o due anni), presiedendo un'assemblea che governava sul relativo territorio.

L'esistenza di un'aristocrazia articolata e decentrata è provata dalla storia. Livio e Silvano citano *quidam reguli Boiorum* : Megalus, Corolamus, Boiorix e Crixus. Livio riferisce inoltre di tre duci catturati, di un dux Dorulatus, di diversi principi nelle trattative svolte durante le guerre galliche ed infine di un trionfo, in cui appaiono nobili Boi catturati. La circostanza è provata anche dalla molteplicità di emissioni da parte dei capi boi e risalta in tutta evidenza a partire dall'anno 57 a.C., quando sotto il governo del capo Biatec si passò dalle emissioni in oro a quelle in argento, con le emissioni delle monete di tipo Biatec in AR.

Le località di rinvenimento di queste monete si trovano sempre solo negli *oppida*, mai in aperta campagna, mentre le monete romane ritrovate sono distribuite uniformemente su tutto il territorio, in particolare lungo le vie commerciali seguite dai Romani. Da ciò si deduce che nel primo secolo a.C. la clientela commerciale celtica apparteneva ad una condizione sociale elevata, residente negli *oppida* e che la monetazione BIATEC non era moneta di uso corrente, ma un mezzo di scambio in funzione delle transazioni economiche dei commercianti del posto verso l'esterno, servendo da contropartita per le merci di importazione.

* Roma.

4. Le monete di tipo BIATEC sono caratterizzate da :

- *unità dei pesi*, il peso medio è di 17,10-17,15 g con una deviazione di 17,35-15,65 g, la quale rivela che i Boi vollero avvicinarsi con questi nominali sia ai tetradrammi macedoni di c. 4,30 g ($4,30 \times 4 = 17,20$), sia ai denari repubblicani romani di c. 3,90 g ($3,90 \times 4 = 15,60$);

- *varietà tipologica delle coniazioni*, che si evince dalle figurazioni di diversi ritratti sul D/ e dalle rappresentazioni di cavalieri armati o animali sacri sul R/. E' significativo che per i vari emblemi della stessa divinità, raffigurati sul R/ delle monete, si riscontrano sul D/ ritratti differenti uno dall'altro, cioè rappresentazioni di persone diverse che dimostrano di essere collegate con la divinità attraverso i simboli posti sul R/ delle monete;

- *quindici leggende con lettere latine*, spesso nell'interlinea e nei riquadri sul R/ delle monete. E' sintomatico che esse conservino una radice celtica nella struttura dei nomi : BIATEC, NONNOS, IANTUMARUS, DEVIL, EVOIURIX, TITTO, BUSU, COUNOS, AINORIX, BUSSUMARUS, MACCIUS, COBROVOMARUS, FARIARIX, COISA e COVIOMARUS; alcuni dei quali mostrano palesi somiglianze con iscrizioni sepolcrali del primo secolo d.C., rinvenute sul territorio austriaco di Eisenstadt e Neusiedl.

5. Nello studio sulla sequenza e lo sviluppo dei diversi tipi sul D/ si perviene ad una successione di coni in linea diretta. Tali genealogie di conio si dividono in *sei linee verticali* che evidenziano sei periodi di emissione, nonché in *otto linee orizzontali* con apparenti somiglianze di tipo, delineando, quali committenti per le emissioni, fino ad otto monetieri, i quali disponevano degli stessi artisti artigiani e della stessa zecca, che si presume fosse Bratislava.

Il raffronto dei tipi sul D/ delle monete ci consente di rilevare che BIATEC figura quale capo monetario in tutti i sei periodi di emissione, dopo aver coniato in esclusiva e senza interferenze di altri per due fasi, che il tipo NONNOS fu coniato per ben quattro fasi e il tipo MACCIUS nelle ultime tre, recando gli emblemi della salvezza di Dispatér, quando sul popolo dei Boi già incombeva il pericolo concreto di una catastrofe.

6. La funzione del principe di garante dell'armonia fra popolo e divinità tutelari emerge dalle similitudini delle coniazioni BIATEC con una delle placche interne in lamina d'argento dorato sbalzato del Calderone di Gundestrup, custodito nel Museo Nazionale di Copenhagen, raffigurante l'esercito formato dal dio *Teutates* per la battaglia contro *Taranis*. A capo dell'esercito si notano quattro cavalieri, i cui elmi a cappa recano quali cimieri i simboli delle diverse divinità protettrici. Anche i R/ delle monete BIATEC mostrano questi emblemi. Nelle *prime due fasi d'emissione* si nota l'emblema della *dea madre-Rigani* : il cavaliere su un cavallo sellato che rappresenta il principe a capo dell'esercito. Dalla *terza fase* appaiono – oltre agli emblemi della dea madre, raffiguranti i diversi reparti armati dell'esercito celtico come il cavaliere galeato con redini, gambali, speroni, spade e sferze – gli attributi di *Taranis* : lupo, leone, arpia, centauressa, cavallo con ruota solare; i simboli di *Teutates* : grifo e cinghiale ed il simbolo di *Dispatér-Taranis* : la pantera che divora l'uomo.

Un accentuato richiamo alla tradizione celtica appare in particolare a partire dalla terza fase in poi, con il ritorno ai simboli autoctoni sul R/, come ad es l'immagine del drago avvolto su sè stesso, che ricorda il D/ dello statere d'oro «Rolltier», evidenziando l'avvenuta perdita dell'indipendenza dell'alleata Gallia.

7. Le intense relazioni con Aquileia e la Gallia risultano dai ritrovamenti in Pannonia di *cinture con uncini a palmette*, di *fibule del tipo di Almgren 65* e da rinvenimenti di bilance, che mostrano l'esistenza di relazioni commerciali tra la Pannonia e la Gallia, nonché Roma. Notoriamente durante il periodo della repubblica si riempivano a Roma, come riserva, le casse dell'erario con lingotti di metalli preziosi e con monete straniere, alcune delle quali erano accettate a peso di metallo.

Proprio per questo fine e per consentire che la loro moneta diventasse anche fuori dal loro territorio un reale mezzo di pagamento, i Boi cercarono di dare alle loro monete in AR connotati simili ai denari repubblicani romani.

8. La nostra indagine e il relativo raffronto hanno messo in evidenza che i monetari boi hanno usato quali prototipi i denari delle famiglie *Flaminia*, *Fonteia*, *Caesia*, *Caecilia*, *Titia*, *Marcia*, *Licina*, *Postumia*, *Claudia*, *Papia*, *Fufia*, *Hosidia*, *Cassia*, *Coilia*, *Hostilia* e *Carisia*, monete coniate tra il 106 e il 45 a.C.

9. Abbiamo cercato di attribuire alle monete celtiche AR BIATEC una datazione, partendo dal presupposto che i capi monetari boi fossero in carica per due anni e che per alcune di tali monete l'accostamento ai prototipi romani dà la certezza della loro datazione. Siamo così giunti al seguente risultato :

- la *prima fase d'emissione* va collocata tra il 57 e il 55 a.C., dopo l'invasione dei Boi nel Norico e l'assalto di Noreia del 58 a.C.;
- la *seconda fase* va inserita tra il 55 e il 53 a.C.;
- la *terza fase*, durante la quale coniano sette monetieri, quale testimonianza del passaggio dei Boi ad un sistema oligarchico più decentrato, tra il 53 e il 51 a.C. Quali prototipi appaiono i denari di L. Marcius Philippus, del 56 a.C.;
- la *quarta fase*, secondo il raffronto con i denari di C. Coilius Caldus, del 51, è databile tra il 51 e il 49 a.C.;
- la *quinta fase* tra il 49 e il 47 a.C.;
- la *sesta fase*, riguardo al paragone con il denario di L. Hostilius Saserna del 48 e la morte di Vercingetorige nel 46, tra il 47 e il 45 a.C., prima che i Boi fossero vinti dai Daci. Questo raffronto rivela che il principe degli Averni venne immortalato quale comandante dei Galli coalizzati e perciò quale eroe nazionale di tutte le stirpi celtiche.

10. Le monete divisionali, cioè i terzi di didramma AR con la leggenda BIATEC e NONNOS, furono coniate dopo l'occupazione dacica di Bratislava. I loro ritrovamenti nel territorio austriaco documentano che i Boi vinti erano costretti ad adeguarsi al sistema monetale dei Norici, nel cui territorio essi erano emigrati. I raffronti del terzo di didramma AR di BIATEC con i denari di T. Carisius del 45 a.C. e quello di NONNOS con i tetradrammi di Augusto del 29-27 a.C. sono indizi seri per la loro data di coniazione.

11. La nostra indagine ci ha consentito, infine, di accertare che anche nei confronti dei Boi vale la constatazione che Roma attuò la sua penetrazione politica nei paesi confinanti in un primo momento attraverso l'economia romana, che fu condizione essenziale per lo sviluppo economico e commerciale dei paesi limitrofi, che erano così costretti ad allinearsi ai mezzi di scambio di origine romana.

Per queste ragioni i Boi crearono dal 57 al 45 a.C. una moneta che si accostava ai preminenti prototipi monetali romani, pur mantenendo in vita i simboli autoctoni della loro antica cultura.

Le trésor monétaire de Serra Riccò

Francesca BARENGHI*

Circostanze del ritrovamento e presentazione degli esemplari attualmente conosciuti

I recenti rinvenimenti di monete padane di modulo inferiore, i cosiddetti «oboli», in territorio milanese¹, ci consentono di aprire nuovamente il discorso sulla moneta divisionale in ambiente cisalpino.

Fino ad oggi questo tipo di nominale era strettamente legato al ripostiglio di Serra Riccò, poichè si trattava del primo e finora unico tesoro in cui furono rinvenuti oboli padani in quantità notevole.

Pur avendone già trattato in altre sedi², sarà opportuno ritornare alla sua analisi. Il tesoro di Serra Riccò fu rinvenuto nel 1923 a nord di Genova, durante alcuni lavori compiuti per il prolungamento della ferrovia S. Olcese-Casella. Gli operai si spartirono le monete; la Soprintendenza riuscì a recuperare centoquarantatre, e ne rinvenne ventuno sparse nel terreno.

L'entità originaria del tesoro ci è sconosciuta. Certamente doveva trattarsi di un grosso ripostiglio, anche se in molti casi, la provenienza da Serra Riccò di ogni «obolo» presente sul mercato, non deve naturalmente risultare scontata.

Grazie ad A. Pautasso che nel 1985 mi mise a disposizione il suo materiale e quello appartenente ad alcuni collezionisti di Genova, da lui contattati, al Dott. G. Pesce di Genova che mi fornì fotografie e pesi delle monete della sua collezione ed in seguito allo studio del materiale conservato presso la Soprintendenza Archeologica del Piemonte, presso il Museo di Palazzo Rosso di Genova, nonché alla comunicazione di D.F. Allen³, è possibile tentare di ricostruire quella che doveva essere la fisionomia originaria del tesoro.

Alle centosessantaquattro monete recuperate dal Barocelli, per conto della Soprintendenza, vanno aggiunti :

- centoquarantasette oboli, una dramma e due denari pubblicati dallo Allen⁴;
- centodiciassette oboli e ventuno dramme donate dalla Signora Maria Ratti Pautasso alla città di Aosta;
- sedici oboli pubblicati dal Pautasso nel 1966⁵;
- novantacinque oboli e sedici dramme appartenenti a tre collezionisti genovesi⁶;
- una dramma e un obolo non noti al Pautasso, conservati a Palazzo Rosso.

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1 E.A. ARSLAN, *La circolazione monetaria nella Milano di II e I secolo a.C. e le emissioni «Insubri»*, in *Scritti in ricordo di Graziella Massari Gaballo e Umberto Tocchetti Pollini*, Milano, 1986, p. 120; ID., *Le Monete. Scavi MM3. Ricerche di Archeologia urbana a Milano durante la costruzione della linea 3 della metropolitana (1982-1990)*, Milano, 1991, p. 73-75.

2 Fr. BARENGHI, *Nuove prospettive sul tesoro di monete padane da Serra Riccò (Memorie dell'Accademia It. di Studi Filatelici e Numismatici)*, Reggio Emilia, 1988, p. 155-167; ID., *Il tesoro di Serra Riccò*, in *Annali di Numismatica*, in corso di stampa; ID., *Gli oboli del tesoro monetale di Serra Riccò*, in *Ricerche sulla monetazione celtica*, a cura del Prof. F. PANVINI ROSATI, in corso di stampa.

3 D.F. ALLEN, *The Serra Riccò Hoard*, in *NCirc*, 79, 1, 1971, p. 15; ID., *New Light on the Serra Riccò Hoard of Cisalpine Coins*, in *JNG*, 21, 1971, p. 97-108.

4 ID., *New Light on the Serra Riccò Hoard of Cisalpine Coins*, in *JNG*, 21, 1971, p. 97-108.

5 A. PAUTASSO, *Le monete padane dell'Italia Settentrionale*, in *Sibrium*, 7, 1966, fig. 483, 486, 495-508.

6 Collezioni : Dott. E. Janin, Avv. G. Terzago, Dott. G. Pesce.

Bisogna tenere presente che un numero imprecisato di pezzi è andato disperso nel mercato locale. La Fischer⁷, inoltre, ha preso in esame centoventisei oboli, appartenenti ad una collezione privata⁸, in parte inediti, in parte pubblicati da Allen. Altri oboli sono conservati presso il Medagliere Milanese, ma senza dati di rinvenimento.

I problemi degli oboli

Primo problema

La classe degli oboli presenta numerosissime varianti tipologiche, pur rimanendo costante il modello della dramma massaliota: al dritto la testa di Artemide e al rovescio il leone anche se molto degenerato. I tipi da me riconosciuti sono dodici⁹, ma è possibile individuare all'interno di essi due filoni ben distinti. Il primo filone comprende i tipi 1, 2, 3, 4 e 5, e denota una imitazione del dritto e del rovescio in cui sono ancora riconoscibili i tipi originali della dramma massaliota. Ad ogni dritto corrisponde un ben distinto tipo di rovescio; mai è stato riscontrato un conio di dritto legato a più coni di rovescio di stile diverso. Risulta chiaro come ciascuna emissione sia ben caratterizzata e separata dalle altre.

Al secondo filone possono essere attribuiti i tipi 6, 7, 8, 9, 10, 11 e 12, con un'imitazione del modello notevolmente degenerata, che pur presentando tipi diversi di dritto, recano al rovescio un identico tipo¹⁰.

Rimane difficile spiegare questa diversità di tipi, da non attribuire, secondo il mio parere, ad una provenienza da varie regioni, nè ad una loro distribuzione nei secoli II e III. È noto che la moneta padana è andata soggetta con il tempo ad una riduzione ponderale, mentre di essa non vi è traccia negli «oboli» finora recuperati. Infatti, pur presentando pesi che oscillano tra g 0,35 e 1,06, i risultati ottenuti dal calcolo statistico ci permettono di affermare che ogni tipo mantiene una media ponderale intorno a g 0,70.

Le ipotesi che si possono fornire sono svariate, poichè intervengono numerose variabili quali la possibilità dell'avvicendamento di uno o più incisori di coni all'interno della stessa zecca, o che si trattasse di prodotti emessi a distanza di qualche tempo, – sempre relativamente breve, essendo il peso costante tra le varie serie – o che ci fossero delle zecche itineranti. Tutti questi fattori da soli o variamente combinati potrebbero essersi prodotti presso i popoli della Liguria e ciò aver dato luogo a tale variata produzione di coni.

Secondo problema

Per quanto riguarda la datazione degli oboli, la presenza di frammenti del denario del tipo di quelli conati da C. Annius e L. Fabius nell'82 a.C. circa¹², costituisce un importante termine di riferimento; l'occultamento può essere avvenuto poco tempo dopo l'82 a.C.

⁷ Br. FISCHER, *Le trésor de Serra Riccò: étude caractériscopique partielle*, in *CahNum*, 68, 1981, p. 45-53.

⁸ Collezione dei signori König di Sarrebruck.

⁹ Fr. BARENGHI, *Gli oboli del tesoro monetale di Serra Riccò*, in *Ricerche sulla monetazione celtica*, a cura del Prof. F. PANVINI ROSATI, in corso di stampa.

¹⁰ Tranne per gli esemplari appartenenti al TIPO 6 var. A, in cui la testa è resa a tre globetti e non a V.

¹¹ E.A. ARSLAN, *Le monete padane preromane a Budapest*, in *NK*, in corso di stampa.

¹² M.H. CRAWFORD, *Roman Republican Coinage*, I, Cambridge, 1974, p. 381.

Terzo problema

Nel tesoro di Serra Riccò, le dramme rinvenute appartengono alle emissioni iniziali, con pesi che variano da un minimo di g 2,40 ad un massimo di g 3,61, con una media di g 3 circa.

Essendo il peso medio degli «oboli» di g 0,71, le dramme dovevano allora rappresentare quattro volte il peso dell'«obolo» stesso.

La compresenza di dramme appartenenti al periodo iniziale della monetazione padana e di «oboli» più recenti, può essere spiegata dall'esigenza di avere alcuni dei pezzi di valore maggiore da utilizzare in circostanze particolari.

Allen¹³ riteneva che le dramme fossero scelte per la tesaurizzazione perchè rappresentavano quattro degli oboli correnti, ma non si era reso conto della reale derivazione del loro peso, poichè, secondo il suo parere, gli «oboli» derivavano il loro peso da quelli di Massalia. Madame Brenot¹⁴ ha, però, affermato che nel I secolo, sotto l'influenza dei popoli vicini, Massalia riprese a coniare oboli, con il tipo della testa virile al dritto e della ruota al rovescio, questa volta del peso di 0,44 g. Dunque i Liguri non imitarono l'obolo di Massalia nè dal punto di vista tipologico, nè da quello ponderale; si basarono invece, sulla dramma padana che doveva circolare nella regione già da diverso tempo.

Quarto problema

Credo che ci si debba porre un altro interrogativo. A Massalia e nel suo entroterra, e in Liguria la moneta su cui si basavano gli scambi era l'obolo, mentre alla dramma erano riservate funzioni legate ad eventi di carattere eccezionale. Invece nelle altre regioni cisalpine la circolazione monetaria, documentata dai ritrovamenti, è costituita quasi unicamente dalla dramma.

È difficile confrontare il livello di sviluppo della struttura socioeconomica della Liguria e delle altre regioni cisalpine. Probabilmente, però, i Liguri scelsero l'obolo spinti dalla necessità di avere moneta di piccolo taglio da utilizzare per un intenso commercio locale, e riservarono la dramma ad occasioni eccezionali.

Conclusioni

I numerosi rinvenimenti di «oboli» nel suolo della Liguria¹⁵ e la quasi assenza di tale numerario nelle altre regioni¹⁶, ci permettono di parlare di numerario ligure, con tipi massalioti «celtizzati», prodotto quando queste genti erano ancora indipendenti da Roma.

Tali «oboli» furono forse emessi da varie tribù in contatto tra loro, il che spiegherebbe l'uniformità di modello, e di standard ponderale.

¹³ D.F. ALLEN, *New Light on the Serra Riccò Hoard*, in *JNG*, 21, 1971, p. 99.

¹⁴ C. BRENOT, *Recherches sur la métrologie des émissions d'argent de Marseille du IV^e au I^{er} siècle av. J.-C.*, in *II Simposi numismàtic de Barcelona*, Barcelona, 1980, p. 17-19.

¹⁵ N. LAMBOGLIA, *Prime conclusioni sugli scavi della vecchia Genova*, «Genova», Genova, 1955, p. 2-4; A. BERTINO, *Un obolo cisalpino dal Pignone*, *Archeologia in Liguria, Scavi e scoperte*, Genova, 1976, p. 88; ID., *Monete cisalpine in Genova*, in *Bollettino Musei Civici Genovesi*, 12-14, 1983, p. 29-31; ID., *Un obolo cisalpino dal castellaro di Camogli*, *Archeologia in Liguria, Scavi e scoperte*, Genova, 1984, p. 94; ID., *Serra Riccò*, *Archeologia in Liguria, Scavi e scoperte*, Genova, 1984, p. 141-142; ID., *Dramme ed oboli cisalpini del gruppo ligure*, in *Studi e ricerche, Cultura del territorio, Comune di Campomorone II*, 1985, p. 73-81. Altri oboli rinvenuti in Liguria, appartenenti alle collezioni di E. Janin, G. Pesce, G. Terzagio, sono pubblicati in Fr. BARENGHI, art. cit. a n. 9.

¹⁶ Vds. nota n. 1.

Non mi sembra possibile affermare che la presenza di qualche «obolo» (da attribuire secondo Arslan ad alcuni dei tipi degli oboli di Serra Riccò¹⁷) al di fuori del suolo ligure possa smentire tale origine.

Per quanto riguarda il tipo di nominale, preferirei mantenere, almeno per il momento, il nome, pur convenzionale di «obolo», poichè, pur non rappresentando la sesta parte della dramma, tale moneta nasce come sua frazione, imitandone il tipo.

17 Vds. nota n. 1.

Probleme der Chronologie des ostkeltischen Münzwesens

Eva KOLNÍKOVÁ*

Zu den größten Problemen der keltischen Numismatik gehört die Chronologie der Münzprägung. Die zeitliche Umgrenzung und chronologische Klassifizierung des keltischen Münzwesens interessiert die numismatische Forschung seit ihren wissenschaftlichen Anfängen. Die moderne Zeit tischt diese Forderung viel dringlicher auf. Dies ergibt sich nicht nur aus neuen keltischen Münzfunden, aus ihren breiteren Verarbeitungs- und Auswertungsmöglichkeiten, sondern auch aus der Initiative verwandter wissenschaftlicher Disziplinen – vor allem der Archäologie – die sich bei ihren Analysen auch auf Münzen stützen.

Die Probleme der Chronologie berühren sämtliche Gebiete des keltischen Münzwesens. In den einzelnen Regionen weisen sie jedoch spezifischen Charakter auf, der durch Besonderheiten ihrer politischen und wirtschaftlich-gesellschaftlichen Entwicklung im Zeitabschnitt der keltischen Zivilisation bestimmt ist. Dies gilt auch für das ostkeltische Münzwesen mit der typischen Nachahmung von Tetradrachmen Philipps II. von Makedonien, aber auch von Münzen Alexanders des Großen, des päonischen Königs Audoleon, evtl. auch von anderen Prägungen der griechisch-makedonischen Welt. Es handelt sich beinahe ausnahmslos um Silberprägungen, und zwar in Gebieten des heutigen Nordbulgariens, Serbiens, Kroatiens und Sloweniens, Rumäniens, der Karpatoukraine, Ungarns, Ostösterreichs – Burgenland – und der Slowakei. Ihre Organisatoren waren Kelten und andere zeitgenössische Stämme, namentlich Thraker und Geto-Daker (den Terminus «ostkeltisches Münzwesen» benütze ich hier eher zum Ausdrücken des geographischen als des ethnischen Aspektes¹).

Bei der Lösung chronologischer Probleme handelt es sich um drei grundlegende Forschungsbereiche: um die Beurteilung der Anfänge der ostkeltischen Münzprägung, um ihren ganzen weiteren Verlauf und um die Zeit ihres Erlöschens. Die Forschungsergebnisse hängen in entscheidendem Maße von den ausgewählten methodischen Arbeitsvorgängen ab. Die keltische Numismatik legt noch immer große Betonung nur auf die eigenen Forschungsmethoden, welche die chronologischen Fragen über Typologie, Metrologie, Münzstil, Qualität des Münzmetalls bewerten². Mit ihr erreicht man auf diese Weise das nötige Bild über die innere Struktur eines betreffenden Münztyps, über seine typologischen und metrologischen Zusammenhänge, auch über die relative zeitliche Einstufung der Prägung im Rahmen des ganzen ostkeltischen Münzwesens³. Sie kapselt sich aber damit in die Lösung der eigenen numismatischen Probleme ab, die Ergebnisse hält sie für allgemeingültig. Wenn es möglich ist, sucht sie eine Stütze in bekannten historischen Daten und Tatsachen. Oft ist sie sich dabei nachträglich nicht genügend dessen bewußt, daß die keltische Münze der Bestandteil eines

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¹ Die ostkeltische Münzprägung mit allen ihren Problemen hat bis jetzt am ausdrückvollsten und geschlossen durch K. PINK, *Die Münzprägung der Ostkelten und ihrer Nachbarn*, Leipzig, 1939, bearbeitet, wobei er sich an die vorangehende Forschung anlehnte. Seine Schlußfolgerungen sind bis heute in vieler Hinsicht gültig, doch teilweise auch schon überholt. Dies bezieht sich besonders auf die Chronologie der ostkeltischen Münzprägung.

² Beinahe allgemein gültig wurde die These: je schwerer die Münze, je qualitativer das Metall und das Bild ist, desto älter ist sie, und umgekehrt. Es bevorzugte sie namentlich K. CASTELIN, z. B. im Werk *Die Goldprägung der Kelten in den böhmischen Ländern*, Graz, 1965. Gegen ihre Gültigkeit z. B. A. HARTMANN, *Ergebnisse spektralanalytischer Untersuchungen an keltischen Goldmünzen aus Hessen und Süddeutschland*, in *Germania*, 54, 1976, S. 11, Anm. 16; S. RIECKHOFF-PAULI, *Der Lauteracher Schatzfund aus archäologischer Sicht*, in *NZ*, 95, 1981, S. 13 und andere Forscher.

³ Wirksam ist dabei auch Göbels Methode der Verfolgung der Stempelgenealogie. Er benützte sie auch in seinem Werk *Ostkeltischer Typenatlas*, Braunschweig, 1973.

archäologischen Fundbestandes ist wenn auch mit spezifischen Eigenschaften, daß ihre zeitliche Bewertung nicht ohne eine Konfrontation mit dem archäologischen Chronologieschema erfolgen kann. Einen solchen Stand verursachten der Mangel an ausgeprägteren Fundkomplexen und das Fehlen keltischer Münzen in archäologischen Objekten.

Der Fundfonds der ostkeltischen Münzen besteht größtenteils aus zufälligen Entdeckungen von Einzelexemplaren, bestenfalls aus Depotfunden. Meistens sind sie ohne jedweden archäologischen Kontext. So konnte es geschehen, daß die numismatische Chronologie in einer bestimmten Forschungsetappe unkritisch auch von der Archäologie übernommen wurde⁴. Die Numismatik, von der Richtigkeit ihrer Ergebnisse so überzeugt, bemühte sich nicht einmal mehr um eine Konfrontation mit der archäologischen Forschung.

Als die Archäologie allmählich ihr Chronologieschema der Latènezeit präzierte, auch mit Hilfe von Ergebnissen exakter wissenschaftlicher Disziplinen (z. B. die Radiokarbondatierung, dendrochronologische Analysen)⁵, äußerte sich sehr deutlich ein Widerspruch zwischen ihr und der Münzdatierung nach numismatischen Kriterien⁶. Am klarsten zeigte sich dies nach der Aufarbeitung keltischer Gräber mit Münzbeigaben⁷. Sie stellten eine Fundkategorie mit bedeutsamer Aussagekraft dar. Auch dieses Beispiel zeigte – die Unterschiede zwischen numismatischer und archäologischer Datierung der Münzen bewegten sich in einer Spannweite von mehr als 100 Jahren –, daß die Numismatik beim Lösen chronologischer Probleme unausweichlich mit der Archäologie zusammenarbeiten muß.

Ein Grundproblem der Chronologie des ostkeltischen Münzwesens ist seine Entstehungszeit. Die Ansichten über sie sind bis heute nicht ganz übereinstimmend. Weiter dauert der bekannte Widerspruch in der Ansicht der sog. alten und neuen Schule über die vorausgesetzte lange (vom Ende des 4. Jh.) und kurze (vom 2. Jh.) Chronologie, resp. modifiziert er sich zu neuen verfochtenen Ansichten. Die Argumente der einen und auch der anderen Seite bewegen sich auf dem Niveau von theoretischen Erwägungen. Entscheidende Erkenntnisse bieten Depotfunde, und zwar von originalen makedonischen, resp. auch anderen zeitgenössischen Münzen und unmittelbaren Nachahmungen der Philippischen Tetradrachmen. Sie stützen die Richtigkeit der Ansicht über die Anfänge der «ostkeltischen» Münzprägung Ende des 4., resp. Anfang des 3. Jh. v. Chr. Nach der geographischen Verbreitung der Funde gebührt das Primat dem Raum zwischen Balkan und unterer Donau, dem Siedlungsgebiet der Stämme der Thraker, Geto-Daker und Kelten. Es handelt sich um Depotfunde, wie z. B. Metschika, Kruschovitza, Scărișoara und weiteren⁸.

Aus dem balkanischen Kristallisationsraum verbreitete sich die Münzprägung in nördliche Richtung, in die Siedlungsgebiete der Kelten, resp. anderer barbarischer Stämme. Es war ein langfristiger, nicht geradliniger Prozeß, und das Erkennen seines Verlaufes ist keine leichte Aufgabe der numismatischen Forschung. Es wird auf dem Forschungsniveau in den heutigen geopolitischen Gebilden gelöst. Die Ergebnisse sind in monographischen oder Teilarbeiten einzelner Forscher vorgelegt. In ihnen kommen verschiedene methodische Verfahren zur Geltung. Oft verlangt wird eine Münz-

4 Dies stellt fest M. SZABÓ, *Audoleon und die Anfänge der ostkeltischen Münzprägung*, in *Alba Regia*, 20, 1983, S. 43.

5 A. HAFNER, *Zur absoluten Chronologie der Mittellatènezeit*, in *Archäologisches Korrespondenzblatt*, 9, 1979, S. 405-409.

6 V. KRUTA, *Keltische Archäologie und Numismatik: Übereinstimmungen, Unterschiede und Ausblicke* (BAR International Series, 200), Oxford, 1984, S. 201-227.

7 H. POLENZ, *Münzen in latänenzeitlichen Gräbern Mitteleuropas aus der Zeit zwischen 300 und 50 vor Christi Geburt*, in *BayerVorgeschbl*, 47, 1982, S. 27-221.

8 C. PREDA, *Über die Anfänge der «barbarischen» Münzprägung vom Typ Philipps II.*, in *JNG*, 20, 1970, p. 63-77.

zusammenstellung mit ununterbrochenen chronologischen Reihen, von den schwersten, qualitativsten Münztypen bis zur leichtesten von schlechterer Qualität. Man erwägt nicht die Möglichkeiten einer differenzierten Entstehungszeit der Münzprägung in den einzelnen Siedlungsgebilden in Abhängigkeit von politischen und sozialökonomischen Bedingungen. Die einzelnen Münztypen sind vom numismatischen Gesichtspunkt gut bearbeitet, unklar bleibt oft nur ihre zeitliche Einreihung. Verursacht ist dies durch den Mangel an chronologischen Anhaltspunkten. Es fehlt eine Konfrontationsmöglichkeit mit dem archäologischen Chronologieschema aufgrund von markanten Komplexen von Münzen und anderen Objekten. Gegenwärtig stehen folgende Fundkategorien zur Verfügung :

- A. Depotfunde keltischer oder anderer barbarischer Münzen und originaler griechisch-makedonischer Prägungen⁹;
- B. Depotfunde keltischer, durch archäologische Gegenstände datierter Münzen (z. B. mittels der Gefäße, in denen sie aufbewahrt waren)¹⁰;
- C. Einzelfunde von Münzen in keltischen Gräbern zusammen mit anderen archäologischen Gegenständen¹¹;
- D. Einzelmünzen in keltischen Siedlungsobjekten in Vergesellschaftung weiterer datierbarer archäologischer Gegenstände¹²;
- E. Komplexe einzelner Münzfunde aus den geschlossenen Zeithorizonten der keltischen Burganlagen¹³;
- F. Münzen mit bestimmten Bildmotiven oder Symbolen, die als Zierelemente auch auf anderen datierbaren archäologischen Gegenständen vorkommen¹⁴, bzw. das Vorkommen eines bestimmten Typs archäologischer Gegenstände in Münzbilder¹⁵;
- G. gemeinsames Vorkommen von Münzen und bestimmten archäologischen Gegenständen in demselben Zeithorizont und geographischen Raum¹⁶.

Funde dieser Art bilden die Grundpfeiler des Chronologieschemas der ostkeltischen Münzprägung im zeitlichen Rahmen der ersten Hälfte des 3. bis Ende des 1. Jh. v. Chr.

- 9 Z. B. Hortfunde aus den Fundorten Jabukovac, Krčedin, Šimian, Drobeta-Turnu Severin, Titel (Jugoslawien). P. POPOVIĆ, *Novac Skordiska. Novac i novčani promet na centralnom Balkanu od IV do I veka pre n. l.*, Beograd, 1987, S. 78-82; Vaidomir-Rasa, Tulgheș, Chișinau-Criș, Hinov, Copăceni, Jiblea (Rumänien). C. PREDA, *Monedele Geto-Dacilor*, București, 1973, S. 33, 402.
- 10 Z.B. ein Hortfund von Münzen in einem Gefäß aus Egyházasdengeleg (Ungarn). K. BÍRÓ-SEY, *Két kelta éremlelet a Nemzeti Múzeumban*, in *Folia Arch.*, 23, 1973, S. 29-35. Zur genauen Datierung, M. SZABÓ, in Anm. 4, wie auch V. KRUTA, in Anm. 6.
- 11 Z.B. aus den Gräberfeldern Bánov und Palárikovo (Slowakei). B. BENADIK, *Keltské mince v hrobech na Slovensku*, in *SlovNumiz*, 8, 1984, S. 97-104.
- 12 Z. B. aus den Fundorten Donja Dolina, Privlaka (Jugoslawien). P. POPOVIĆ, *op. cit.*, S. 50; N. MAJNARIĆ-PANDŽIĆ, *Prilog problematici kasnolatskih naselja u Slavoniji*, in *Opuscula archaeologica*, 9, 1969, S. 23-34; Nitra (Slowakei). E. KOLNÍKOVÁ, *Nález rímskeho aes grave s keltskými mincami v Nitre*, in *SlovArch*, 12, 1964, S. 391-408.
- 13 Z. B. von den Burganlagen der sog. Púchov-Kultur (Nordslowakei). K. PIETA, *Die Púchov-Kultur*, Nitra, 1982, S. 65-74; siehe auch P. POPOVIĆ, *Nalazi novca iz latenskog naselja na Gomolavi*, in B. JOVANOVIĆ, M. JOVANOVIĆ, *Gomolava, naselje mladog gvozdenog doba*, Novi Sad-Beograd, 1988, S. 101-104; V.G. KOTIGOROŠKO, *Gorodišča rubeža našoj ery v verchnem Potisije*, in *SlovArch*, 37, 1989, S. 21-67.
- 14 Z. B. das Leiermotiv auf Münzen aus der Slowakei. E. KOLNÍKOVÁ, *Keltské mince s lýrovitým znakom na Slovensku*, in *Študijné zvesti AÚ SAV*, 13, 1964, S. 195-206, wie auch auf Schweren des sog. ungarischen Stils. V. ŠČASNÁR, V. KLIMENT, M. ČERVENÁNSKÝ, L. ZACHAR, *Zlomky dávkovacej platničiek na výrobu keltských mincí - Nálezy zo Šaštína-Stráža a Bratislavy*, in *SlovNumiz*, 8, 1984, S. 134-139.
- 15 So wie im westkeltischen Münzwesen, z. B. das Vorkommen eines Dolches mit anthropomorphem Griff auf einer Goldmünze wahrscheinlich der Unelli. V. KRUTA, *op. cit.*, S. 209-210. Im ostkeltischen Münzwesen fehlt einstweilen ein ähnlicher Beweis.
- 16 Z. B. die gleiche Verbreitung griechischer Kantharoi und Münzen der Audoleon-Typen im Karpatenbecken. M.B. HELLEBRANDT, *Der keltische Kantharos in Csobaj und sein historischer Hintergrund*, in *ActaArch*, 41, 1989, S. 33-49.

Zur Datierung des Erlöschens tragen römische republikanische wie auch frühkaiserzeitliche Denare bei. Die heimische barbarische Prägung ersetzen sie entweder gänzlich¹⁷, oder beeinflussen sie das keltische Münzwesen mit ihrem Bildreichtum¹⁸, oder wurden sie zur Anregung ihrer unmittelbaren Nachahmung¹⁹. In manchen Fällen datieren sie ganz konkret die Schlußphase der keltischen Münzprägung²⁰.

So wie sich die Prägung der ostkeltischen Münzen in gegebenem Raum allmählich, von einem Machtzentrum zum anderen verbreitete, so erlosch sie auch allmählich. Nicht einmal in der Endphase des keltischen Münzwesens sind alle chronologischen Probleme gelöst. In neuer Beleuchtung erscheinen sie jedoch schon nach wirksamer Zusammenarbeit der keltischen Numismatik mit der Archäologie. Das ist einer der Wege zur Lösung allgemeiner Probleme der Chronologie des ostkeltischen Münzwesens.

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- 17 So wie in Dakien nach der Vereinigung der dakischen Stämme durch Burebista ca. im dritten Jahrzehnt des 1. Jh. v. Chr. C. PREDA, *Monedele*, S. 448.
- 18 Z. B. manche Varianten des Münztyps Bratislava (Slowakei). V. ONDROUCH, *Keltské mince typu Biatec z Bratislavy*, Bratislava, 1958.
- 19 Im Gebiet des heutigen Rumänien. N. LUPU, *Aspekte des Münzumlaufs im vorrömischen Dakien*, in *JNG*, 17, 1967, S. 101-121, aber auch des heutigen Ungarn. M. TORBÁGYI, *Die Münzprägung der Eravisker*, in *ActaArch*, 36, 1981, S. 161-196.
- 20 Z.B. ein Denar des Kaisers Augustus aus den J. 2 v. Chr.-14 n. Chr. im Depotfund keltischer Münzen aus der Slowakei. K. PIETA, E. KOLNÍKOVÁ, *Druhý hromadný nález keltských mincí z Dolného Kubína-Vel'kého Bystrica*, in *SlovArch*, 34, 1986, S. 383-408.

MONNAIES ROMAINES

1. RÉPUBLIQUE

Metallographic and Analytical Investigation of Silver- and Aes- Coinage of the Roman Republic

Ulrich ZWICKER*

Summary

Aes Rude was partially produced from copper containing up to 10 % of iron. In the 257 aes-coins investigated the content of antimony increased between 200 and 125 B.C. (dating after M.H. Crawford) and to a lesser degree between 100 and 75 B.C. The early dodrans (only one coin investigated) was produced from a brass-type alloy, the late dodrans from copper. At the beginning the quadrigatus coinage was produced about 950 fine, but diminished later on to 500 fine. It was also silverplated with a copper core and produced from tin bronze containing 7,7 % Sn and 2,1 % Pb (8 coins investigated). In the 300 *denarii* which were analysed a distinct content of bismuth was observed in coins struck between 157 and 122 B.C. and no gold and bismuth could be detected in coins struck between 118 and 90 B.C. The fineness of one of the 7 *victoriati* investigated decreased to 500 fine and that of one of the 19 *quinarii* investigated to 580 fine.

Introduction

There are already many analytical, but only few metallographic investigations on coinage of the Roman Republic (510-31 B.C.)¹. In silver base coins an enrichment of silver in the surface area or in the whole coin by corrosion processes can be responsible for a higher value of the silver content than during the time of its circulation. By a metallographic inspection of the rim of the coin, such a corrosion process can be detected, and if there is an area not yet infected by corrosion the original value of the silver content can be analysed by microprobe analysis. If the coin is corroded through, very often the silver content can be calculated from the corroded microstructure of the coin². In copper base coins the patina layer contains the alloying elements (besides zinc) so that the alloying elements can be identified (besides zinc) by analysis of the surface³. By metallographic and analytical investigations, the following article can give some hints on the real debasement of silver coinage and on the change in alloying elements of copper base coinage during the time of the Roman Republic.

Aes Rude

Although *aes rude* was used already before the time of the Roman Republic, it is also present in hoards of the time of the early Roman Republic⁴. In such a hoard of *aes rude*, many pieces having a blue-green azurite-malachite patina layer were detected, but also pieces having a dark brown patina layer were present. Two of the pieces with the

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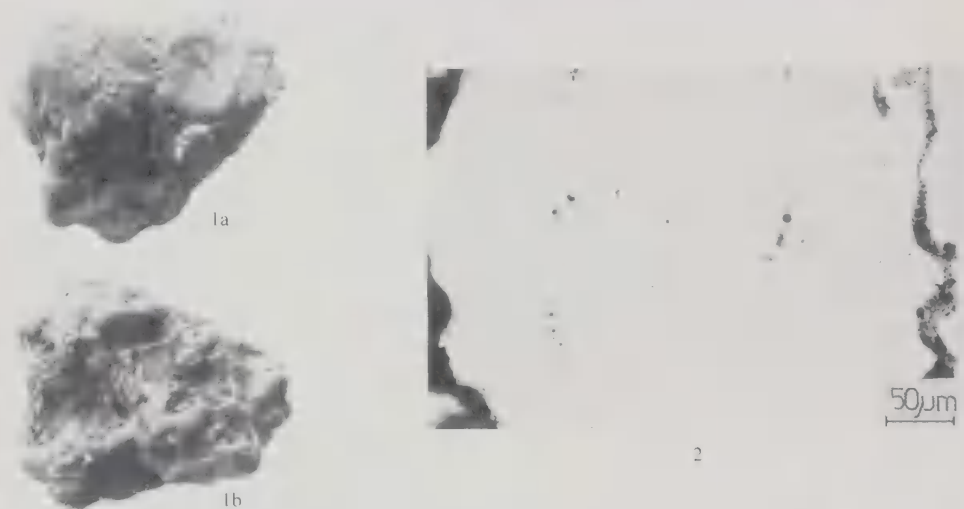
¹ M.H. CRAWFORD, *Roman Republican Coinage*, I and II, Cambridge, 1974, reprint 1989.

² U. ZWICKER, U. HOFMANN and K. NIGGE, *Untersuchungen an Pfennigen der Hohenstaufenzeit aus der Königsmünzstätte Nürnberg*, in *Berichte Münzen- und Medaillenkunde*, Kricheldorf Verlag, Freiburg/Breisgau, 13, 1977, p. 297-312 and 339-352.

³ U. ZWICKER, K. NIGGE und B. URBON, *Verteilung von metallischen Elementen in Patinaschichten*, in *Microchimica Acta*, suppl. 8, 1979, p. 393-419.

⁴ M.H. CRAWFORD, *Roman Republican Coin Hoards* (Royal Numismatic Society, Spec. Publ., 4), London, 1969.

blue-green patina layer and one piece with the brown patina layer could be investigated⁵. One (71.3 g) piece of blue-green patina layer is shown in fig. 1a and 1b. The metallographic and microprobe inspection of this non ferromagnetic sample and that of the second blue-green sample showing a very small amount of ferro magnetism (76 g) of fig. 2 proved that in a matrix of copper solid solution, light grey inclusions of copper sulfide, containing small amounts of lead and of arsenic, were present. Within these light grey inclusions, dark inclusions consisting of copper-lead-zinc-sulfide could be observed. The strongly ferro magnetic sample with the brown patina (349 g) shown in fig. 3a and b shows in the microstructure of fig. 4 about 10 % white dendrites of iron containing copper and cobalt, a big nodule of copper sulfide and small nodules of iron-(nickel)-copper-chlorites. Spectrographic analysis of 4 areas of each of these three samples of *aes rude* showed no difference in the trace elements arsenic, antimony, lead, bismuth and silver, which were all present in small amounts or in traces. Gold was only present in the 76.0 g sample. Cobalt, tin and zinc could not be detected in the 71.3 g sample which was probably reduced at the lowest temperature of the three samples (about 1150° C). The strongly ferromagnetic sample (349 g) which contained about 10 % iron, according to the binary system copper-iron⁶, was produced at a reduction temperature of about 1350° C. The brown rusty colour of this specimen was also observed in other specimens of *aes rude* from Northern Etruria⁷. In an oxide ingot from the Bronze Age excavated in Hattusa (Bogazköy) in Anatolia, showing strong ferromagnetism, also an iron content of about 10 %, as in the strongly ferromagnetism *aes rude* sample, was detected⁸.



Early aes coins. Crawford 14-42 (280-212 B.C.)

The analytical investigation of 30 coins produced after Crawford⁹ between 280 and 212 B.C. is summarized in table I. The results of RFA (X-ray fluorescence analysis) are given in values of 10³ impulses/min using a chromium tube (values in brackets using a tungsten tube). The values of SPA (spectroscopic analysis, Q24, Zeiss Jena) are

⁵ The Aes Rude was given for investigation by Dr. H. Voegtl, M. and M. AG, Basel, reported in UB 271/79 of Lehrstuhl Werkstoffwissenschaft Metalle, University Erlangen-Nürnberg.

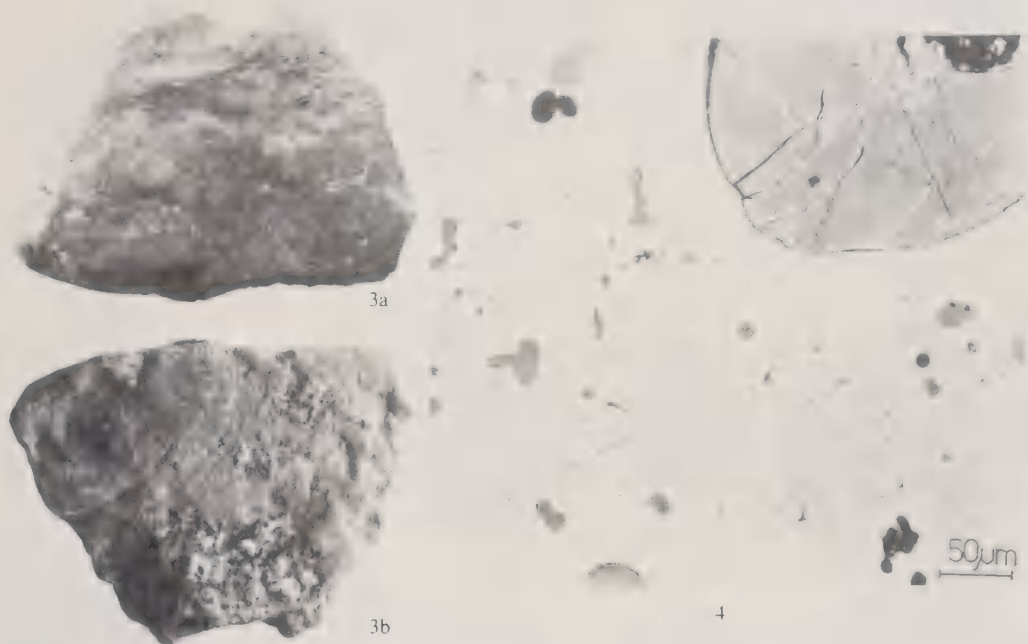
⁶ M. HANSEN and K. ANDERKO, *Constitution of Binary Alloys*, New York, 1958, p. 580-582.

⁷ E.J. HAEBERLIN, *Aes Grave*, Frankfurt, 1910.

⁸ A small piece of this oxide ingot was given for investigation by Dr. Ing. P. Neue, reported in Volkswagenstiftung FV 1/35351, *Early Copper Production in the Area of the Eastern Mediterranean Sea*, 1979-1982, part 4 *Türkei*, Lehrstuhl Werkstoffwissenschaft Metalle, Universität Erlangen-Nürnberg.

⁹ Cf. *supra*, n. 1.

presented with MC (main component) → +++++ → + → tr (trace) → nd (not detected). The RFA was done on the surface, the SPA on the rim of the coins besides the coins Cr. 35.1; 35.4 and 41.4 from which drillings were used for the SPA. The results of the 23 analysed coins up to Cr. 39.9 are in good agreement with those of six coins from the former investigations¹⁰. All coins consist of more or less leaded tin bronze. A *dupondius* (Cr. 41.4) showed a high amount of zinc and was obviously produced from a brass type



alloy. This cast coin is showed in fig. 5a and b and has a weight of 149 g. An *uncia* of the type Cr. 38.6 has a weight of 14.4 g and is shown in fig. 6a and b. No tin was detected by RFA, whilst in coins having a lower weight, tin could be detected. One of these coins having a weight of 9.27 g is shown in fig. 7a and b. Only traces and in one coin Cr. 18.5 a small amount of antimony could be detected in the coins of table I. As no antimony could be detected in ore and ancient slag of copper production in Etruria (Fucinaia-valley and gulf of Baretta near Populonia)¹¹ and in Sardinia (Funtana-Raminosa and Domusnovas)¹², it may be possible that the copper for this coin production has been smelted in these areas.

Aes coins. Crawford 50.550 (211-31 B.C.)

From this period, 127 coins were investigated. They are listed in table II. Whilst in the former investigations¹³, only two coins were detected, which contained antimony, 60 coins of table II contain more than a trace of antimony. Already before the mining and smelting of copper in Etruria was stopped by Augustus, the output of these mines may not have been high enough for the supply of the mint of Rome for aes-coinage production. Therefore copper from abroad must have been imported. As can be seen from the composition of celtic bronze and potin coins there is a high amount of antimony

¹⁰ *Ibidem.*

¹¹ The samples were taken by U. Zwickler, report of Lehrstuhl Werkstoffwissenschaft Metalle. In preparation.

¹² The samples were taken by Prof. Dr. P. Virdis, University of Cagliari, report of Lehrstuhl Werkstoffwissenschaft Metalle Universität Erlangen-Nürnberg. In preparation.

¹³ Cfr *supra*, n. 1.



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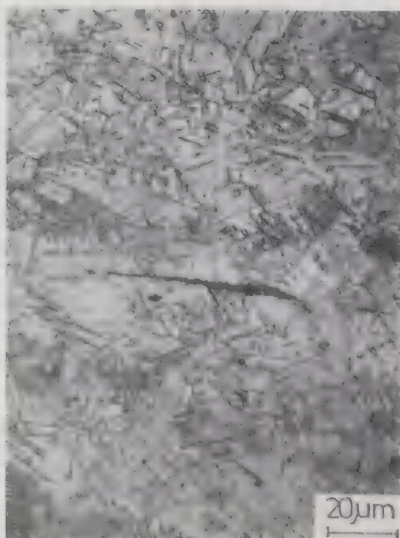
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present in the coins of Gaul, whilst in the coins from Spain there is much less or no antimony in the copper base alloys for coinage¹⁴.

The *semis* (Cr. 261.2), shown in fig. 8a and b, and the *dodrans* (Cr. 266.2), shown in fig. 9a and b, are minted from pure copper, all other coins with the exception of the coins of Clovius (Cr. 476.1a) and of Oppius (Cr. 550.2d) are produced from more or less leaded tin bronze. One coin from Oppius (Cr. 550.2d, 13.5 g), shown in fig. 10a and b, was investigated by microprobe analysis. The micrographs of a section on the rim of this coin show in the unetched condition (Fig. 11) very small particles, probably sulfides and in the etched condition (Fig. 12), the distorted grains of brass. The quantitative analysis of the elements detected by spectrographic analysis gave very similar results (Cu 77 %; Zn 22,7 %; Pb 0,19 %; Ag 0,06 %; Fe 0,06 %; Sn 0,05 %) to former investigations¹⁵. All bronze coins of Octavian of the type Cr. 535.1 weighing 20, 7-9, 6 g (Fig. 13a and b show the coin of 10.5 g) do contain antimony, whilst in the two heavier coins (35 and 21 g) of the type Cr. 537.1/2 (Fig. 14a and b) and of the type Cr. 532.2 (Fig. 15a and b), no antimony could be detected. If this can be proved by further investigations, the type Cr. 535.1 may have been minted in Gaul (Lugdunum?) and the type of Cr. 535.1/2 and of Cr. 535.2 in Rome.



Didrachm type coinage, Crawford 13.1-31.1 (280-214 B.C.)

Whilst in the coin of the didrachm type which were investigated by surface analysis no debasement to less than 90.5 % fine was detected¹⁶, in earlier investigations done by the cupellation process a debasement to 30 % fine was found in the so called *Quadrigati* (Cr. 28-34)¹⁷. In addition, a plated *quadrigatus* showed a silver content of less than 33.3 % Ag by cupellation¹⁸ and in a hoard from Apulia 75 plated *quadrigati* with the legend ROMA in relief in a linear frame were detected¹⁹. Also copper base *quadrigati*, which were thought to come from an anima of a plated coin were mentioned²⁰. Eight coins of the didrachm type could be investigated. The silver content was calculated by

14 U. ZWICKER, *Metallographische und analytische Untersuchungen an keltischen Münzen* (BAR International Series, 200), Oxford, 1984, p. 484-512.

15 Cfr *supra*, n. 1.

16 D.R. WALKER, *The Silver Contents of the Roman Republic Coinage*, in *Metallurgy in Numismatics*, I, ed. by D.M. METCALF and W.A. ODDY (Royal Numismatic Soc., spec. publ., 13), London, 1980, p. 55-72.

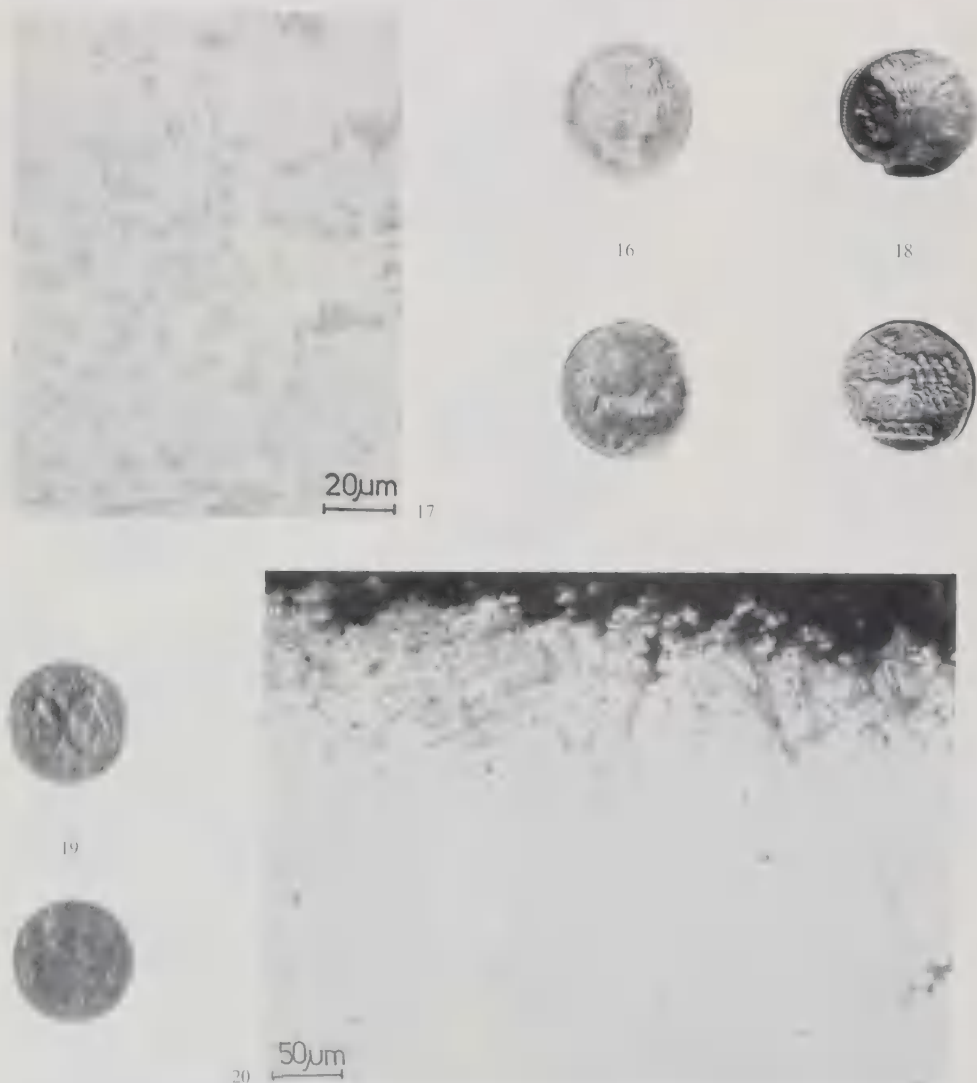
17 M. BAHRFELDT, *Monete romano-campane*, in *Blätter für Münzfreunde*, 1930-1933, p. 682.

18 A. VON RAUCH, *Analyse römischer Münzen*, in *ZfN*, 1874, p. 32.

19 Cfr *supra* n. 4, hoard 65.

20 Th. MOMMSEN, *Geschichte des römischen Münzwesens*, Berlin, 1860. Reprint, Graz, 1956.

density measurements and by micrographic inspection. The results are showed in table III. The two earliest coins Cr. 13.1 (7, 11 g) and Cr. 6.1 (6.62 g) have a high standard of the silver content, which is also observed in the didrachm *quadrigatus* Cr. 28.3 (7.10 g) and in the half *quadrigatus* Cr. 28.4 (3.05 g), whilst in the coin Cr. 28.3 (6.27 g) the silver content calculated from the metallographic investigation decreased to 80 % Ag. A very badly struck coin of the type Cr. 31.1 (5.93 g) (Fig. 16a and b) was corroded through, so that the silver content of about 50 % Ag could only be calculated from areas in which copper oxhide was still present (Fig. 17). A plated *quadrigatus* Cr. 31.1 var. (5.35 g) shows (Fig. 18a and b) a wrong inscription RMOA. Details of this coin, including a micrographic inspection, are given in another publication²¹. Another coin of the type Cr. 31.1 var. had a weight of only 4.74 g and was produced from a copper base alloy. It is shown in fig. 19a and b. As can be seen from the microstructure of the rim (Fig. 20), there is corrosion from the surface of a type, which is often observed on ancient objects produced from copper alloys. From these investigations one can assume that between the first and second Punic War, there



²¹ U. ZWICKER, A. ODDY and S. LA NIECE, *New Discoveries on Roman Techniques of Silvering Coins*, in *Metal Colouring. Historical Studies in Plating and Patination. Symposium British Museum*, ed. by S. LA NIECE and P. CRADDOCK, London, 1992. Forthcoming.

was a high standard of fineness in the didrachm type coins, but during the second Punic War against Hannibal, there was a strong debasement, saving silver by plating and finally a production of *quadrigatus* type coins from copper alloy (antimon-lead-tin-zinc-bronze). The gold content of the seven silver coins was higher than that which is observed in silver from Laurion (Attica, Greece). Therefore, silver of another area, perhaps from Spain, where such high level of gold is present²², must have been used for the production of the silver coinage during the time of the Roman Republic.

Denarii

Analysis of *denarii* has shown that the fineness of this important coinage was usually higher than 95 % Ag²³. Therefore, only four coins of table IV were investigated by quantitative microprobe analysis. One coin – Cr. 113.1 (3.34 g) (Fig. 21a and b) – was 950 fine, two coins – Cr. 321.1. (3.78 g) (Fig. 22a and b) and Cr. 352.1a (3.95 g) (Fig. 23a and b) – were 960 fine and the coin Cr. 352.1a (3.81 g) (Fig. 24a and b) was 940 fine. Devaluation of the *denarius* coinage was done by plating copper or iron cores with thin silver sheets. In agreement with the report of Caius Plinius Secundus, most plating of *denarii* with copper cores was done about 100 B.C. and with iron cores in coins of Marcus Antonius²⁴. The silver content of the silver layer of the copperplated *denarius* Cr. 282.1 (3.47 g) (Fig. 25a and b) was 990 fine and that of an ironplated *denarius* of Marcus Antonius excavated at Xanten/Rhine²⁵ LEG XII – Cr. 544.26 (2.60 g) (Fig. 26a and b) – was 750 fine (Fig. 27). Because of the high corrosion capacity of the iron core, most of the iron plated *denarii* may have been dissolved in the humid atmosphere of the earth. Besides the trace elements gold and bismuth, also copper and lead, were analysed spectrographically on the rim of the coins. The results are shown in table IV. Copper is indicated in some coins as main component if there is not much corrosion on the rim and if the copper content is above 5 %. Lead would not be detected if the cupellation process lasted too long, diminishing also the content of bismuth or if the silver was parted from gold silver alloys by the NaCl process.

Bismuth was detected in extraction products of chalcoppyritic ore from the Thasos town mine. This chalcoppyritic ore had a high content of silver. Bismuth was also detected in lead which had been in contact with Fe-As speiss from the antique silver production leaving many slagheaps in the Pangaion (Nikisiani)²⁶. In the coin no. 187 (92) supposed to have been produced in Thasos of the Asyut hoard, a high bismuth content of 0.36 %, besides a high gold content of 0.39 % was detected²⁷.

As can be seen from the analysis of table IV, a distinct increase of the bismuth content can be observed from the *denarii* Cr. 197.1b (157 B.C.) to Cr. 277.1 (122 B.C.). This would be the time of the fourth Macedonian War and of the organisation of Macedonia as a Roman province. A very low gold content which is observed in the *denarii* Cr. 282.4 (118 B.C.) to 335.3a (90 B.C.) comes probably from parting gold from electron or from parting gold from silver containing more than 1 %. Such a low gold content is also observed in the coins from the Oreskii in the Asyut

22 Cfr *supra*, n. 14.

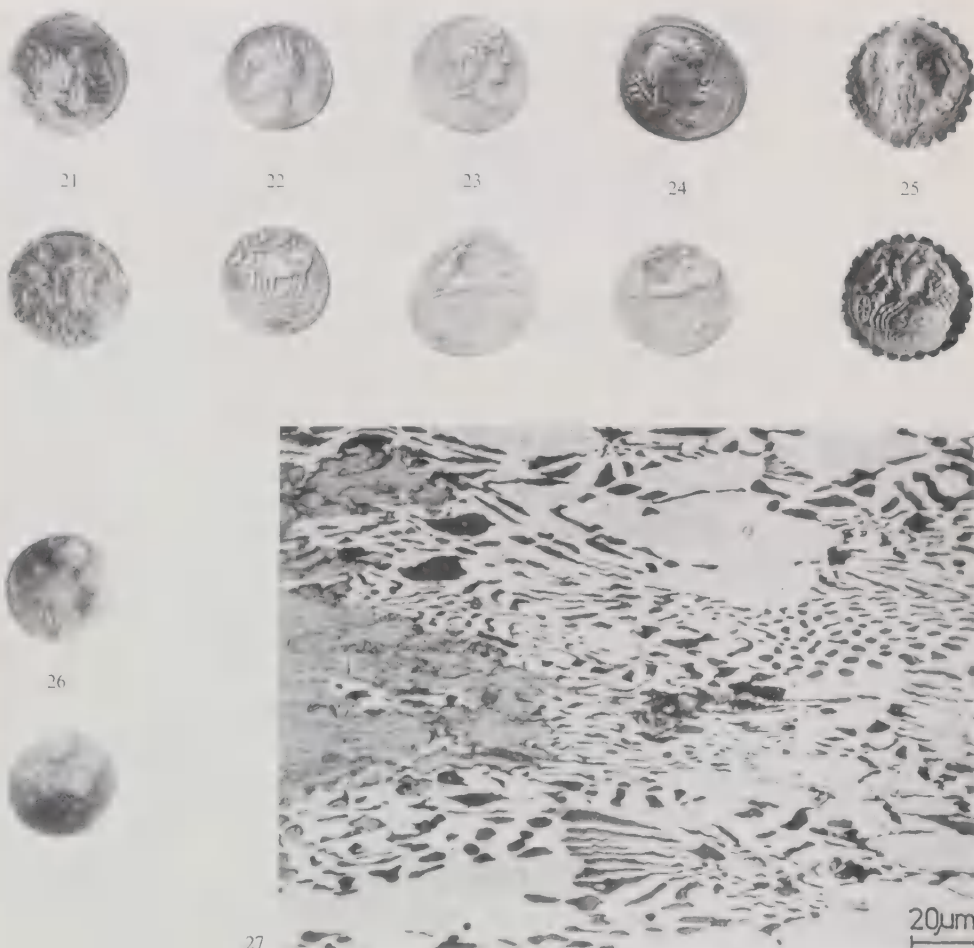
23 Cfr *supra*, n. 1 and 16.

24 Cfr *supra*, n. 21.

25 V. ZEDELIIUS, *Ein Legionsdenar des Markus Antonius aus Vetera*, in *Das Rheinische Landesmuseum, Bonn, Berichte*, 1985, 1, p. 10-11; ID., *Nummi subferrati*, in *RIN*, 90, 1988, p. 125-130.

26 *Early Copper in the Area of the Eastern Mediterranean Sea*, in *Volkswagenstiftung*, F.V.1/35351, 1979-1982, part 3, Greece and Greek islands and experiments done with speiss from Pangaion at Lehrstuhl Werkstoffwissenschaft Metalle, University of Erlangen.

27 N.H. GALE, W. GENTNER and G.A. WAGNER, *Mineralogical and Geographical Silver Sources of Archaic Greek Coinage*, in *Metallurgy in Numismatics*, I, ed. by D.M. METCALF and W.A. ODDY (Royal Numismatic Soc., spec. publ., 13), London, 1980, p. 3-49.



hoard²⁸. This type of silver may have been transported to Rome from Macedonia when the NaCl process was used again to separate silver from gold of the Strymon valley, or it may have been brought from Egypt or from Syria, where the gold from the Nile or from Pactolus together with the gold from the mountains was parted into silver and gold. At the high temperature above 950° C, bismuth was lost as bismuth chloride which evaporated and gold did not dissolve in the silver chloride formed during this sodium chloride parting process. There is an increase in the amount of bismuth again mainly in the *denarii* of the legions of Marcus Antonius, who obviously used the silver from Pangaion and Thasos for his last coinage. A much more detailed investigation of genuine coins from hoards could give more and better information on the usage of raw silver in the mint of Rome for striking *denarii* than it was possible by the investigation of only 300 *denarii* minted over a period of about 200 years.

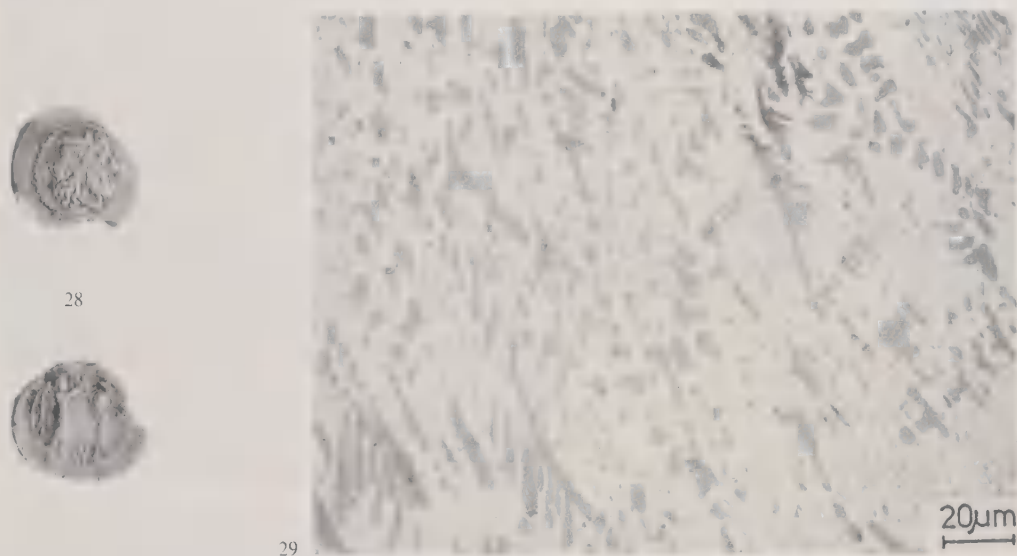
Victoriati, Quinari and Sestertii

By X-ray fluorescence analysis of the surface of 29 *victoriati*, the range of the silver content was found to be between 73 and 93 % Ag²⁹. Only 7 *victoriati* could be investigated. The results are shown in table V. As most of the *victoriati* are very similar in appearance, it is often difficult to find the right Crawford no. In the spectroscopic analysis, only one coin Cr. 120.1 (2.86 g) (Fig. 33a and b) shows a bismuth content

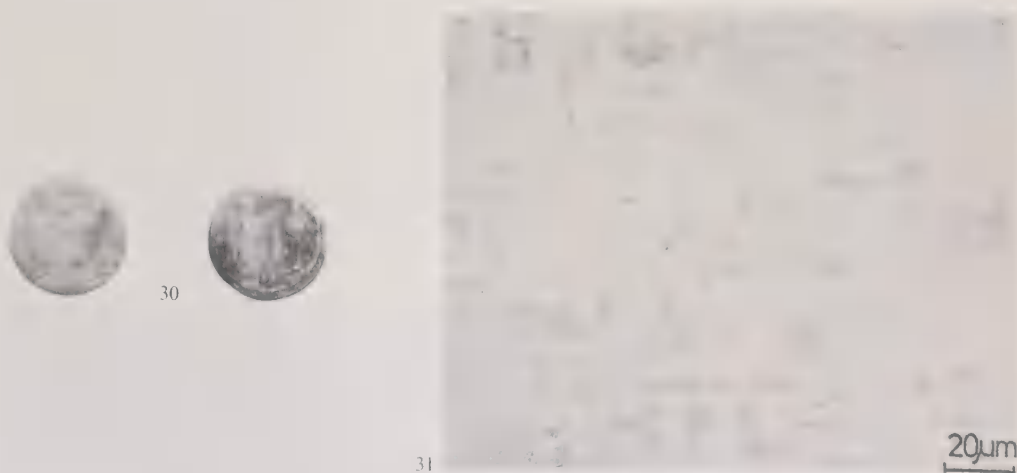
²⁸ *Ibidem*

²⁹ *Cfr supra*, n. 16.

with the intensity + of the spectroscopic line with the wave length 308.772nm (gold 267.595 nm; copper 324.754 nm; lead 283.307 nm). If the dating and the Crawford no. are correct, the coming of the higher bismuth content would be earlier than that of the *denarii* of table IV. Three *victoriati* were investigated by microscopic investigation of the rim. The *victoriat* 44.1 (2.32 g) (Fig. 28a and b) was calculated 600 fine (Fig. 29),



the *victoriat* 91.1b (2.73 g) (Fig. 30a and b) 800 fine (Fig. 31) and the *victoriat* 120.1 (2.86 g) (Fig. 32a and b) 500 fine (Fig. 33). With 500 fine, the silver content of the *victoriati* can be lower than was supposed in the former investigation³⁰.

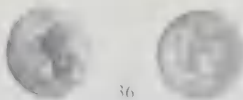
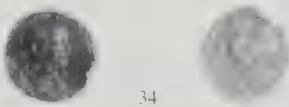
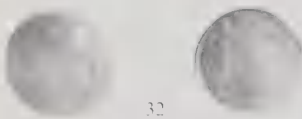


Also from X-ray fluorescence analysis it was supposed that the silver content of the *quinarii* had dropped to 75 % Ag in the issues between 97 and 90 B.C.³¹. About the same value (720 fine) was detected by microscopic inspection of the rim of the *quinarius* Cr. 341.3 (1.87 g) (Fig. 34a and b). This *quinarius* shows a nearly eutectic microstructure (Fig. 35), whilst the *quinarius* Cr. 343.21 (1.62 g) (Fig. 36a and b) was calculated 850 fine from its microstructure (Fig. 37). This *quinarius* has a very thick layer of silver bromide (Fig. 38), so that the density dropped to 7.45g/cm³. The silver layers of the plated *quinarii* Cr. 345.2 (1.42 g) (Fig. 39a and b) and 373.1b (1.93 g)

30 *Ibidem.*

31 *Ibidem.*

(Fig. 40a and b) were 900 and 710 fine. The maximum bismuth content in the *quinarii* is found between the types Cr. 333.1 (97 B.C.) and 373.1 (81 B.C.) and therefore at a later time than with the *denarii*. One can assume that these *quinarii* may have been produced from remelted coins of the earlier *denarii* issues. No *quinarius* was included which had such a low gold content that it could not be detected by the spectrographic analysis.



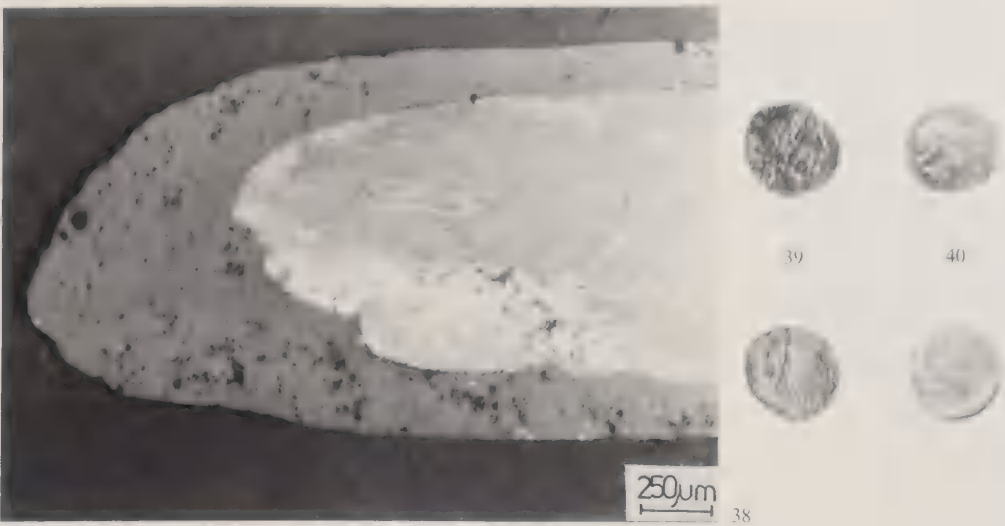


TABLE I. ANALYSIS OF EARLY AES COINS (CRAWFORD 14-42, 280-212 B.C.)³²

| Crawford n° | Type x | Weight g | Ag | As | Au | Bi | Co | Cu | Fe | Pb | Sb | Sn | Zn |
|----------------|------------------|-------------|------|-----|----|----|----|--------|------|-------|----|-------|------|
| 14.4 | Qu | 81.0 | +++ | + | nd | tr | nd | MC | +++ | ++++ | nd | ++++ | nd |
| 17.1a | HL | 5.94 | nd | nd | nd | nd | nd | 257 | 4.0 | 3.5 | nd | 61.0 | nd |
| | | | + | tr | nd | nd | nd | MC | ++ | ++ | nd | +++ | nd |
| 18.5 | Se | 58.7 | nd | nd | nd | nd | nd | 207 | 2.7 | 104 | nd | 150 | nd |
| | | | ++ | ++ | tr | tr | ++ | MC | + | +++++ | + | +++++ | nd |
| 21.7 | SU | 12.1 | nd | nd | nd | nd | nd | 134 | nd | 111 | nd | 50.6 | nd |
| | | | +++ | + | nd | tr | nd | MC | ++ | ++++ | tr | ++++ | nd |
| 26.3 | Li | 2.80 | nd | nd | nd | nd | nd | 102 | 1.8 | 1.4 | nd | 119 | nd |
| | | | + | + | nd | nd | nd | MC | + | + | nd | ++++ | nd |
| 26.4 | HL | 2.03 | nd | nd | nd | nd | nd | 58.5 | 1.1 | 3.2 | nd | 818 | nd |
| | | | + | tr | nd | nd | + | MC | + | + | nd | ++++ | nd |
| 35.1 | As ^{xx} | 266 | nd | nd | nd | nd | nd | ++++ | nd | ++ | nd | ++ | nd |
| 35.4 | Qu | 68.9 | + | + | nd | tr | nd | MC | nd | ++++ | nd | +++ | nd |
| 35.5 | Se | 40.8 | 4.0 | nd | nd | nd | nd | 97.1 | 10.1 | 43.6 | nd | 46.0 | nd |
| | | | ++ | + | nd | + | ++ | MC | ++ | ++++ | nd | ++++ | nd |
| 36.3b | Tr | 22.0 | nd | nd | nd | nd | nd | 240 | nd | 16.1 | nd | 141 | nd |
| 38.5 | Se | 29.3 | nd | nd | nd | nd | nd | 606 | nd | 10.6 | nd | 4.86 | nd |
| 38.5 | Se | 23.7 | nd | nd | nd | nd | nd | 521 | nd | 7.4 | nd | 32.1 | nd |
| 38.6 | Un | 14.4 | nd | nd | nd | nd | nd | 546 | nd | 4.6 | nd | nd | nd |
| 38.6 | Un | 12.5 | 4.7 | nd | nd | nd | nd | 315 | nd | 6.5 | nd | 97.4 | nd |
| 38.6 | Un | 9.29 | nd | nd | nd | nd | nd | 266 | 4.1 | 8.6 | nd | 137 | nd |
| | | | ++ | + | nd | nd | + | MC | + | ++++ | + | +++ | nd |
| 38.7 | SU | 7.31 | nd | nd | nd | nd | nd | 262 | nd | 3.6 | nd | 88.7 | nd |
| 38.7 | SU | 6.84 | nd | nd | nd | nd | nd | 211 | 2.7 | 11.8 | nd | 98.1 | nd |
| 38.7 | SU | 6.82 | nd | nd | nd | nd | nd | 241 | 3.7 | 5.2 | nd | 154 | nd |
| 38.7 | SU | 6.80 | nd | nd | nd | nd | nd | 232 | nd | 11.0 | nd | 122 | nd |
| 38.8 | QU | 2.08 | nd | nd | nd | nd | nd | 89.4 | nd | 4.2 | nd | 122 | 2.09 |
| 39.3 | Se | 22.3 | nd | nd | nd | nd | nd | 3400 | nd | 30.0 | nd | 130 | nd |
| 39.9 | Un | 10.5 | nd | 1.9 | nd | nd | nd | 903 | 2.8 | 1.9 | nd | 660 | nd |
| | | | ++ | + | nd | nd | + | MC | + | ++ | tr | ++++ | nd |
| 41.4 | Du | 149 | + | nd | nd | nd | nd | MC | tr | ++ | tr | + | ++ |
| 41.6e | Sem | 17.1 | nd | nd | nd | nd | nd | 176 | nd | 93 | nd | 65 | nd |
| 41.10 | Un | 11.8 | nd | 3.0 | nd | nd | nd | 889 | 2.8 | 9.1 | nd | 80.3 | nd |
| | | | +++ | ++ | nd | nd | nd | MC | tr | ++ | tr | ++++ | nd |
| 41.10 | Un ^{xx} | 11.2 | nd | nd | nd | nd | nd | 544 | nd | 4.0 | nd | 62.3 | nd |
| 41.10 | Un | 8.1 | (42) | nd | nd | nd | nd | (1400) | (33) | (17) | nd | (77) | nd |
| | | | + | + | nd | tr | tr | +++++ | tr | ++ | nd | ++ | nd |
| 41.11 | SU ^{xx} | 4.24 | nd | nd | nd | nd | nd | 142 | nd | 6.8 | nd | 164 | nd |

³² x) Du = Dupondius; As = As; Sem = Semis; Tr = Triens; Qu = Quadrans; Se = Sextans; Un = Uncia; SU = Semiuncia; Qu = Quartuncia; Li = Litra; HL = Half-litra.
xx) SPA = intensity low, therefore no MC for copper.

| Crawford n° | Type x | Weight g | Ag | As | Au | Bi | Co | Cu | Fe | Pb | Sb | Sn | Zn |
|----------------|-----------|-------------|----|----|----|----|----|------|-----|------|----|------|------|
| 42.4 | Un | 6.40 | + | + | nd | nd | nd | ++++ | nd | +++ | tr | ++ | nd |
| 42.4 | Un | 5.83 | nd | nd | nd | nd | nd | 54.5 | nd | 107 | nd | 56.3 | 2.33 |
| | | | ++ | + | nd | nd | ++ | 549 | 2.6 | 43.3 | nd | 89.3 | nd |
| | | | | | | | | MC | nd | ++++ | nd | ++++ | nd |

TABLE II. ANALYSIS OF AES COINS (CRAWFORD 50-356, 211-38 B.C.)³³

| Crawford n° | Type x | Weight g | Ag | As | Au | Bi | Co | Cu | Fe | Pb | Sb | Sn | Zn |
|----------------|-----------|-------------|------|-----|----|-----|-------|------|------|------|------|------|---------|
| 50.4 ? | Sem | 16.3 | nd | nd | nd | nd | nd | 78.6 | 3.7 | 149 | nd | 45.7 | 2.1 |
| 56.2 | As | 45.4 | nd | nd | nd | nd | nd | 211 | nd | 87.9 | nd | 70 | 2.2 |
| 56.2 | As | 38.8 | nd | nd | nd | nd | nd | 184 | 5.0 | 76.5 | nd | 27.2 | nd |
| 56.2 | As | 38.6 | nd | nd | nd | nd | nd | 309 | nd | 82.0 | nd | 3.5 | (6) |
| | | | | | | | | | | | | | (Paint) |
| 56.2 | As | 36.7 | nd | nd | nd | nd | nd | 294 | 3.5 | 66 | nd | 46.5 | nd |
| 56.2 | As | 32.0 | ++++ | + | nd | nd | + | MC | ++ | ++++ | tr | ++++ | nd |
| | | | | | | | (Ni+) | | | | | | |
| 56.2 | As | 31.9 | nd | nd | nd | nd | nd | 163 | 3.5 | 96.4 | 4.0 | 66.8 | nd |
| 56.2 | As | 29.4 | 4.8 | nd | nd | nd | nd | 244 | 2.8 | 75.7 | nd | 410 | nd |
| 56.3 | Sem | 19.8 | nd | nd | nd | nd | nd | 60 | nd | 157 | nd | 51 | nd |
| 56.3 | Sem | 19.6 | nd | nd | nd | nd | nd | 245 | 2.3 | 93.3 | nd | 49.8 | nd |
| 56.3 | Sem | 18.7 | nd | nd | nd | nd | nd | 330 | 56 | 410 | nd | 200 | nd |
| | | | nd | nd | nd | nd | nd | (01) | (35) | (57) | nd | (33) | nd |
| | | | + | + | nd | tr | nd | MC | + | ++++ | nd | +++ | nd |
| 56.3 | Sem | 17.1 | nd | nd | nd | nd | nd | 176 | nd | 93 | nd | 65 | nd |
| 56.3 | Sem | 16.3 | nd | nd | nd | nd | nd | 78.6 | 3.7 | 149 | nd | 45.7 | 2.1 |
| 56.3 | Sem | 14.2 | nd | nd | nd | nd | nd | 454 | nd | 24.7 | nd | 48.3 | nd |
| 56.3? | Sem | 9.72 | nd | nd | nd | nd | nd | 160 | nd | 72.3 | nd | 97 | nd |
| 56.4 | Tr | 9.09 | nd | nd | nd | nd | nd | 277 | 2.9 | 79 | 3.4 | 51.8 | nd |
| | | | +++ | + | nd | nd | +++ | MC | ++ | ++++ | + | ++++ | nd |
| 56.4 | Tr | 5.21 | nd | nd | nd | nd | nd | 401 | nd | 164 | nd | 74.4 | 3.2 |
| 56.6 | Se | 6.32 | nd | nd | nd | nd | nd | 251 | 10.4 | 6.6 | nd | 127 | nd |
| 56.6 | Se | 6.09 | nd | nd | nd | nd | nd | 283 | 4.8 | 5.3 | nd | 69.4 | nd |
| 56.6 | Se | 5.78 | nd | nd | nd | nd | nd | 283 | 4.8 | 5.3 | nd | 69.4 | nd |
| 56.6 | Se | 5.25 | nd | nd | nd | nd | nd | 162 | 4.1 | 8.9 | nd | 91 | nd |
| 56.8 | SU | 6.68 | nd | nd | nd | nd | nd | 440 | 1.4 | 1.4 | nd | 7.0 | 1.6 |
| | | | nd | tr | nd | nd | nd | MC | + | + | nd | ++ | nd |
| 56.8 | SU | 3.81 | nd | 2.6 | nd | nd | nd | 225 | 21 | 67 | nd | 85.9 | nd |
| | | | +++ | + | nd | + | ++ | MC | ++++ | +++ | nd | ++++ | nd |
| | | | | | | | | | | ++ | | | |
| 57.3 | As | 37.6 | nd | nd | nd | nd | nd | 228 | 3.7 | 86.1 | nd | 81.9 | 2.3 |
| | | | + | + | nd | nd | nd | MC | + | +++ | nd | +++ | nd |
| 57.3 | As | 36.5 | nd | nd | nd | nd | nd | 225 | 3.12 | 110 | nd | 12.1 | 2.9 |
| 97.22b | As | 22.9 | nd | nd | nd | nd | nd | 61.2 | nd | 189 | nd | 36.6 | nd |
| | | | +++ | + | nd | nd | + | MC | nd | +++ | ++ | ++++ | nd |
| | | | | | | | | | | ++ | | | |
| 100.1b | Un | 24.7 | nd | 1.5 | nd | nd | nd | 549 | 2.56 | 43.3 | nd | 89.3 | nd |
| | | | ++ | + | nd | nd | ++ | MC | nd | ++++ | nd | ++++ | nd |
| 100.1b | Un | 24.3 | 3.1 | 2.8 | nd | nd | nd | 1003 | 1.9 | 42.7 | 6.04 | 48.9 | nd |
| | | | +++ | ++ | nd | nd | ++ | MC | nd | ++++ | ++ | ++++ | nd |
| 100.3 | Tr | 6.30 | nd | nd | nd | nd | nd | 472 | nd | 3.8 | nd | 40.5 | nd |
| 124.3 | As | 38.6 | nd | nd | nd | nd | nd | 315 | 9.3 | 75.2 | nd | 21.0 | nd |
| | | | +++ | + | nd | tr | tr | MC | nd | ++++ | nd | ++++ | nd |
| | | | +++ | + | nd | tr | tr | MC | nd | +++ | nd | ++++ | nd |
| | | | | | | | | | | ++ | | | |
| 133.4 | As | 40.6 | nd | nd | nd | nd | nd | 268 | 2.9 | 67.6 | nd | 17 | nd |
| 145.1 | As | 31.7 | nd | nd | nd | nd | nd | 167 | nd | 92.9 | 3.6 | 30.1 | nd |
| 149.3a | Tr | 7.13 | nd | nd | nd | nd | nd | 431 | 3.7 | 20.7 | nd | 58.0 | nd |
| | | | ++ | nd | nd | nd | nd | MC | + | tr | nd | ++ | nd |
| 162.3? | As | 23.3 | 3.13 | nd | nd | nd | nd | 2.12 | 3.7 | 73.2 | 4.14 | 61.2 | nd |
| | | | nd | nd | nd | nd | nd | 63.7 | 20.8 | 51.4 | 3.88 | 41.1 | nd |
| | | | ++++ | ++ | nd | +++ | tr | MC | + | +++ | ++ | +++ | nd |

33

x) Du = Dupondius; As = As; Do = Dodrans; Sem = Semis; Un = Uncia; SU = Semuncia; Q = Quadrans

xx) n.i. = not investigated.

| Crawford n° | Type x | Weight g | ++++ Ag | ++ As | nd Au | +++ Bi | tr Co | MC Cu | + Fe | +++ Pb | ++ Sb | +++ Sn | nd Zn |
|----------------|-----------|-------------|-------------------|----------------|----------------|-----------------|----------------|-------------------------|-----------------|---------------------|----------------|--------------------|----------------|
| 174.1 | As | 29.8 | nd ++ | nd + | nd nd | nd ++ | nd + | 332 MC | 4.56 + | ++ 54.2 ++++ | 6.21 + | ++ 20.6 +++ | nd nd |
| 174.1 | As | 22.2 | nd ++ + | nd nd tr | nd nd nd | nd nd nd | nd nd nd | 1000 MC +++ ++ | 22 + nd | 290 ++++ +++ | nd tr nd | 120 ++ ++ | nd nd nd |
| 178.1 | As | 27.6 | nd | nd | nd | nd | nd | 59 | 11.1 | 128 | nd | 66.6 | nd |
| 180 | As | 30.4 | nd | nd | nd | nd | nd | 339 | 3.4 | 54 | nd | 51.7 | nd |
| 182.2 | As | 22.2 | 6.1 | nd | nd | nd | nd | 568 | nd | 24.7 | 6.2 | 10.8 | nd |
| 182.5 | Qu | 5.53 | 7.4 +++ | nd tr | nd nd | nd nd | nd nd | 824 MC | 2.3 + | 2.0 +++ | 5.1 ++ | 64.1 +++ | nd nd |
| 183.1 | As | 24.0 | +++ 3.8 + | nd 3.5 + | nd nd nd | nd nd nd | nd nd nd | MC 605 MC | ++ nd +++ | tr 116 +++ | ++ nd tr | ++++ 54.0 ++ | nd nd nd |
| 185.1 | As | 36.1 | 3.9 +++ | 4.6 ++ | nd nd nd | nd nd nd | nd nd + | 723 MC + | nd + nd | 129 MC + | 6.6 ++ + | 45 +++ +++ | nd nd nd |
| 185.1 | As | 22.3 | nd +++ | nd ++ | nd nd nd | nd nd nd | nd nd + | 187 MC + | nd + + | 127 ++++ | 9.3 +++ | 21.7 +++ | nd nd nd |
| 186.1 | As | 31.7 | 3.4 ++ | nd + | nd nd nd | nd nd + | nd nd + | 246 MC + | 4.7 + + | 83.8 ++++ | nd + | 419 +++ | nd nd nd |
| 187.2 | As | 26.7 | 3.4 ++ ++ | nd ++ + | nd nd nd | nd ++ + | nd ++ nd | 288 MC +++ ++ | 2.4 + nd | 50.0 ++++ +++ | 4.2 + + | 26.4 +++ ++ | nd nd nd |
| 187.22 | As | 19.0 | 4.1 | nd | nd | nd | nd | 129 | nd | 147 | 10.0 | 17.6 | nd |
| 189.1 | As | 31.6 | 4.6 tr | nd ++ | nd nd | nd nd | nd nd | 419 MC | 2.1 + | 46.6 +++ | 8.8 ++ | 25.4 +++ | nd nd |
| 190.1 | As | 23.1 | 5.1 ++++ ++ | nd ++ + | nd tr nd | nd ++++ + | nd tr nd | 261 MC ++ ++ | 4.1 ++ nd | 96.3 +++ +++ | 4.2 + tr | 21.4 ++++ + | nd nd nd |
| 190.1 | As | 22.4 | 4.9 +++ | nd ++ | nd nd | nd ++ | nd tr | 603 MC | 3.2 ++ | 15.3 ++ | 4.8 + | 18.5 +++ | nd nd |
| 190.1 | As | 21.8 | 5.4 ++++ | nd +++ | nd tr | nd ++++ | nd tr | 435 MC | 2.4 ++ | 66.5 +++ | 4.8 ++ | 15.2 ++++ | nd nd |
| 191.1? | As | 25.9 | nd +++ | nd + | nd tr | nd nd | nd ++ | 362 MC | nd ++ | 82.7 +++ | nd + | 27.8 ++++ | nd nd |
| 193.1 | As | 28.3 | 3.5 + | nd ++ | nd nd | nd nd | nd nd | 269 MC | 3.4 ++ | 123 +++ | 8.8 ++ | 7.4 +++ | nd nd |
| 193.1 | As | 16.3 | 4.8 tr | nd ++ | nd nd | nd nd | nd nd | 555 MC | 3.7 ++ | 128 +++ | 14.4 ++ | nd ++ | nd tr |
| 194.1 | As | 24.2 | 6.5 nd | 6.3 ++ | nd nd | nd nd | nd nd | 180 MC | 4.7 ++ | 8.71 +++ | 4.4 ++ | 8.7 +++ | 2.7 tr |
| 195.1 | As | 25.4 | 3.5 | nd | nd | nd | nd | 170 | nd | 97 | 9.8 | 48.1 | nd |
| 196.4 | Qu | 4.69 | nd ++ | nd tr | nd nd | nd nd | nd nd | 421 +++ ++ | 7.7 ++ | 54 +++ | nd nd | 27 ++ | nd nd |
| 198.1b? | As | 21.0 | nd | nd | nd | nd | nd | 475 | nd | 31 | 3.9 | 31 | nd |
| 199.2? | As | 27.4 | nd ++ | nd + | nd nd | nd + | nd ++ | 3200 MC + | 20 + | 125 ++++ | nd tr | 100 +++ | nd nd |
| 199.2 | As | 19.9 | 3.5 | nd | nd | nd | nd | 270 | 4.3 | 100 | 13.6 | 7.4 | nd |
| 199.2 | As | 18.9 | nd | nd | nd | nd | nd | 319 | nd | 84 | 13.7 | 14 | nd |
| 200.2 | As | 20.2 | nd +++ | 5.3 ++ | nd nd | nd nd | nd + | 460 MC ++ | 3.9 ++ | 146 ++++ | 7.3 ++ | 69.8 ++++ | nd nd |
| 201.2 | As | 28.6 | 3.9 +++ ++ | nd + + | nd nd nd | nd + + | nd tr nd | 252 MC +++ ++ | 5.7 ++ nd | 47.4 ++++ +++ | 6.0 + | 59.5 +++ ++ | nd nd nd |
| 204.1 | As | 23.3 | 3.8 | nd | nd | nd | nd | 215 | nd | 124 | 17.9 | 231 | nd |

| Crawford n° | Type x | Weight g | Ag | As | Au | Bi | Co | Cu | Fe | Pb | Sb | Sn | Zn |
|----------------|-----------|-------------|------|-----|----|-----|----|------|------|------|------|------|------|
| | | | +++ | + | nd | nd | + | MC | + | +++ | ++ | ++++ | nd |
| | | | | | | | | | | ++ | | | |
| 214.2 | As | 18.8 | 4.3 | nd | nd | nd | nd | 499 | 2.7 | 31.6 | 3.7 | 15.4 | nd |
| | | | +++ | + | tr | nd | + | MC | + | +++ | + | +++ | nd |
| | | | ++ | + | + | nd | nd | ++++ | nd | +++ | tr | ++ | nd |
| 214.2? | As | 18.8 | 5.8 | nd | nd | nd | nd | 468 | 13.3 | 21 | 5.1 | 276 | nd |
| | | | +++ | + | tr | nd | + | MC | + | +++ | + | +++ | nd |
| 214.2b | As | 24.2 | nd | nd | nd | nd | nd | 184 | 2.9 | 122 | 4.0 | 34.0 | 2.0 |
| | | | ++ | + | nd | + | nd | MC | + | ++++ | tr | +++ | nd |
| | | | + | tr | nd | tr | nd | ++++ | nd | +++ | tr | + | nd |
| 215.2a | As | 22.8 | 3.9 | nd | nd | nd | nd | 401 | 2.7 | 31.6 | 7.0 | 28.7 | nd |
| | | | ++++ | ++ | nd | +++ | tr | MC | + | +++ | ++ | +++ | nd |
| | | | | | | | | | | ++ | | | |
| 217.2 | As | 20.8 | +++ | ++ | nd | ++ | + | MC | + | ++++ | ++ | +++ | nd |
| | | | 3.9 | 5.2 | nd | nd | nd | 547 | 3.5 | 119 | 22.1 | 66.2 | nd |
| | | | ++ | +++ | nd | nd | tr | MC | nd | ++++ | ++ | +++ | nd |
| | | | ++ | ++ | nd | + | nd | MC | nd | ++++ | ++ | +++ | nd |
| | | | ++ | +++ | nd | ++ | nd | MC | tr | +++ | ++ | +++ | nd |
| | | | | | | | | | | ++ | | | |
| 227 | As | 15.1 | 4.4 | nd | nd | nd | nd | 123 | 3.7 | 176 | 6.1 | 3.8 | nd |
| | | | +++ | ++ | + | nd | tr | MC | + | MC | +++ | +++ | nd |
| 240.4b | Qu | 3.84 | nd | nd | nd | nd | nd | 468 | 2.8 | 4.0 | nd | 4.3 | nd |
| | | | + | nd | nd | nd | nd | MC | nd | + | + | + | nd |
| | | | + | nd | nd | nd | nd | MC | nd | ++ | nd | ++ | nd |
| 244.5 | Un | 2.64 | nd | nd | nd | nd | nd | 202 | 8.7 | 4.9 | 3.5 | 10.8 | 2.0 |
| | | | ++ | tr | nd | nd | nd | MC | + | + | nd | +++ | nd |
| 247.2a | Tr | 4.78 | nd | nd | nd | nd | nd | 250 | nd | 25.4 | nd | 80.8 | nd |
| | | | + | + | nd | nd | nd | MC | tr | ++++ | nd | +++ | nd |
| 256.2a | Sem | 9.60 | nd | nd | nd | nd | nd | 431 | 3.7 | 20.7 | nd | 50.8 | nd |
| | | | ++ | nd | nd | nd | nd | MC | + | tr | nd | ++ | nd |
| 256.2a | Sem | 6.60 | 6.2 | nd | nd | nd | nd | 1163 | 3.18 | 2.04 | 20.4 | 20 | nd |
| | | | +++ | tr | nd | nd | nd | MC | +++ | ++ | ++ | +++ | nd |
| | | | +++ | tr | nd | nd | nd | MC | + | ++ | +++ | + | nd |
| 257.2 | Sem | 6.06 | nd | nd | nd | nd | nd | 533 | 13.7 | nd | nd | 3.6 | nd |
| | | | + | nd | nd | nd | nd | +++ | tr | + | nd | + | nd |
| | | | | | | | | | | ++ | | | |
| 257.4 | Qu | 4.68 | + | nd | nd | nd | nd | MC | ++ | tr | nd | ++ | nd |
| | | | nd | nd | nd | nd | nd | 643 | 8.37 | nd | nd | 3.28 | nd |
| | | | + | nd | nd | nd | nd | MC | +++ | tr | nd | ++ | nd |
| | | | + | nd | nd | nd | nd | MC | + | nd | nd | + | nd |
| 261.2 | Sem | 6.57 | nd | nd | nd | nd | nd | 1128 | 2.98 | 1.84 | nd | nd | nd |
| | | | + | nd | nd | nd | nd | MC | + | tr | nd | tr | nd |
| 261.4 | Qu | 3.13 | 2.78 | nd | nd | nd | nd | 909 | 3.45 | 2.27 | 4.92 | 8.76 | 2.75 |
| | | | ++ | nd | nd | nd | nd | MC | + | tr | tr | + | nd |
| 265.3 | Qu | 3.15 | nd | nd | nd | nd | nd | 223 | 3.2 | nd | nd | 16.4 | nd |
| | | | ++ | + | nd | nd | nd | MC | +++ | ++ | nd | +++ | nd |
| 265.3 | Qu | 2.66 | 6.9 | nd | nd | nd | nd | 222 | 5.3 | 24.3 | nd | 390 | 5.2 |
| | | | +++ | nd | nd | nd | nd | MC | tr | ++ | nd | ++++ | nd |
| | | | ++ | nd | nd | nd | nd | MC | nd | ++ | nd | +++ | nd |
| 266.2 | Do | 16.6 | nd | nd | nd | nd | nd | 6.14 | 3.9 | 1.5 | nd | nd | nd |
| | | | + | nd | nd | nd | nd | MC | ++ | nd | nd | tr | nd |
| | | | + | nd | nd | nd | nd | MC | + | tr | nd | nd | nd |
| 296.2 | As | 26.0 | 3.32 | nd | nd | nd | nd | 1008 | 3.99 | 6.64 | nd | 63.2 | nd |
| | | | ++ | + | nd | nd | nd | MC | nd | ++ | nd | +++ | nd |
| 334.2 | As | 26.2 | 7.0 | nd | nd | nd | nd | 204 | 3.1 | 43 | 6.1 | 388 | nd |
| | | | ++ | tr | nd | nd | nd | MC | + | ++ | tr | +++ | nd |
| | | | + | nd | nd | + | nd | MC | tr | + | nd | ++ | nd |
| 335.4 | As | 18.0 | nd | nd | nd | nd | nd | 257 | 3.6 | 65.5 | nd | 41.8 | nd |
| | | | +++ | + | nd | nd | nd | MC | nd | +++ | nd | ++++ | nd |
| | | | | | | | | | | ++ | | | |
| | | | +++ | tr | nd | nd | nd | MC | tr | +++ | nd | +++ | nd |
| | | | | | | | | | | ++ | | | |
| 335.5a | Sem | 7.89 | nd | nd | nd | nd | nd | 170 | 4.0 | 54.2 | nd | 91.5 | 2.5 |
| | | | ++ | nd | + | nd | nd | MC | + | +++ | nd | ++++ | nd |
| 335.5b | Sem | 15.5 | nd | nd | nd | 3.7 | nd | 254 | 3.1 | 10.3 | nd | 33.4 | nd |
| | | | tr | nd | nd | nd | nd | +++ | + | + | nd | +++ | nd |
| | | | | | | | | | | ++ | | | |
| 335.8a | Se | 6.57 | 5.8 | nd | nd | nd | nd | 100 | nd | 14.3 | nd | 50.8 | 2.6 |
| | | | + | nd | nd | nd | nd | +++ | + | + | nd | +++ | nd |

| Crawford n° | Type x | Weight g | Ag | As | Au | Bi | Co | Cu | Fe | Pb | Sb | Sn | Zn |
|------------------------|-----------------------|-------------|---------------------|----------------------|----------------------|---------------------|----------------------|-------------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------------|
| 337.5 | As | 9.41 | 10.3 ++ +++ | nd tr tr | nd nd nd | nd nd nd | nd nd nd | ++ 237 MC | 3.8 + tr | 5.1 nd nd | 25.2 nd ++ | 22.9 ++ ++ | nd nd nd |
| 339.1a | As | 10.8 | nd | nd | nd | nd | nd | 290 | nd | 25.4 | nd | 80.8 | nd |
| 339.2 | Sem | 8.41 | nd | nd | nd | nd | nd | 258 | 5.8 | 50.2 | nd | 14.1 | nd |
| 339.2 | Sem | 4.62 | nd | nd | nd | nd | nd | 93.2 | 3.1 | 99.4 | 4.18 | 16.2 | nd |
| 339.1a? | As | 10.8 | nd | nd | nd | nd | nd | 290 | nd | 25.4 | nd | 80.8 | nd |
| 339.2 | Sem | 6.83 | nd | nd | nd | nd | nd | 167 | 7.7 | 96.6 | nd | 9.9 | nd |
| 340.4 | As | 12.6 | 3.4 | nd | nd | nd | nd | 234 | 2.5 | 71 | 3.8 | 16.7 | nd |
| 340.56 | Sem | 7.32 | 8.3 | nd | nd | nd | nd | 276 | 5.6 | 2.8 | 9.8 | 34.2 | nd |
| 342.7b | As | 12.1 | nd + | nd tr | nd nd | nd nd | nd nd | 657 +++ | 3.6 ++ | 2.3 +++ | nd nd | 44 +++ | nd nd |
| 342.74 | As | 10.9 | nd +++ | nd tr | nd nd | nd nd | nd nd | 184 MC | 4.3 ++ | 123 ++++ | nd tr | 46 ++++ | 3.8 nd |
| 344.4a | As | 13.1 | nd | nd | nd | nd | nd | 320 | 5.9 | 5.73 | nd | 16.1 | nd |
| 344.4a | As | 13.1 | 3.6 ++ | 3.8 +++ | nd nd | nd nd | nd nd | 365 MC | 3.7 +++ | 24.1 +++ | nd nd | 26.9 +++ | nd nd |
| 344.4a | As | 12.3 | 3.9 +++ ++ | nd nd tr | nd nd nd | nd nd nd | nd nd nd | 548 MC MC | 2.3 ++ + | 2.9 tr + | 3.3 nd + | 8.4 +++ ++ | nd nd nd |
| 344.4a | As | 9.58 | nd | nd | nd | nd | nd | 88 | 4.9 | 124 | nd | 44 | nd |
| 344.4a | As | 9.15 | nd +++ + | nd tr tr | nd nd nd | nd nd tr | nd nd nd | 1083 MC MC | 2.1 + nd | 2.46 ++ + | 3.77 + + | 43.1 +++ +++ | nd nd nd |
| 344.4c? | As | 12.8 | nd +++ | nd + | nd nd | nd nd | nd nd | 200 MC | 20 + | 170 ++ | nd ++ | 74 ++ | nd nd |
| 344.4c | As | 8.08 | 6.7 +++ + | nd nd tr | nd nd nd | nd tr tr | nd nd nd | 310 MC MC | 4.6 ++ + | 21.2 ++ + | 8.0 + | 92.6 +++ ++ | nd nd nd |
| 346.3 | As | 8.21 | 4.5 +++ | nd tr | nd nd | nd nd | nd nd | 923 MC | 2.1 tr | 8.8 +++ | 6.2 ++ | 41 ++++ | nd nd |
| 350.3e | As | 12.6 | 4.5 | nd | nd | nd | nd | 534 | 5.3 | 2.5 | 3.8 | 2.9 | 2.6 |
| 350.3f | As | 8.75 | 5.2 +++ tr | 2.4 nd nd | nd nd nd | nd nd nd | nd nd nd | 530 MC +++ | 3.1 tr + | 2.4 + | nd nd tr | 5.3 + tr | nd nd nd |
| 339.2 | Sem | 6.83 | nd ++ + | nd + nd | nd nd nd | nd + tr | nd nd nd | 167 MC +++ ++ | 7.7 + tr | 96.6 ++++ ++ | nd nd nd | 9.9 +++ ++ | nd nd nd |
| BMC 2,126.3 var. | Sem? Pom- peius | 6.15 | ++ | tr | nd | nd | tr | MC | + | nd | +++ | +++ | nd |
| BMC 2,127.11 | Sem? Pom- peius | 5.39 | ++ | nd | nd | nd | nd | MC | + | ++++ | nd | +++ | nd |
| 476.1a | Du? (Caesar) | 16.0 | +++ nd nd | nd nd ++ | nd nd + | nd nd nd | nd nd tr | MC 1005 nd | + | ++++ 2.6 MC | tr nd + | +++ nd + | nd nd +++ |
| 476.1a | Du? (Caesar) | 15.9 | + | nd | nd | nd | nd | MC | + | tr | nd | nd | tr |
| 476.1a | Du? (Caesar) | 15.8 | nd nd ++ + | nd nd tr nd | nd nd nd nd | nd nd + tr | nd nd nd nd | 560 1143 MC MC | 4.6 4.8 + + | 3.7 3.6 ++ + | nd nd nd nd | 3.4 4.1 ++ + | 92.8 261 ++++ +++ |
| 476.1a | Du? (Caesar) | 15.6 | ++ | nd | nd | tr | nd | MC | ++++ | tr | nd | + | ++++ |
| 479.1 | As? Pom- peius | 23.9 | nd +++ + | nd + tr | nd nd nd | nd tr nd | nd nd nd | 561 MC MC | 3.1 + tr | 144 +++ ++ | nd + nd | 102 +++ ++ | nd nd nd |
| 479.1 | As? | | nd | nd | nd | nd | nd | 870 | 25 | 130 | nd | 30 | nd |
| | Pom- peius | 22.0 | 4.1 ++ + | 3.2 tr + | nd nd nd | nd nd tr | nd nd nd | 262 MC MC | 3.3 + + | 69.2 ++++ ++ | 5.5 + tr | 269 +++ ++ | nd nd nd |
| 535.1 | As? | 20.7 | 3.7 | nd | nd | nd | nd | 609 | 2.9 | 161 | 6.5 | 9 | nd |

| Crawford n° | Type x | Weight g | Ag | As | Au | Bi | Co | Cu | Fe | Pb | Sb | Sn | Zn |
|----------------|-----------------|-------------|--------------------|----------------|----------------|----------------|----------------|---------------------|---------------------|---------------------|--------------------|------------------------|----------------|
| | | | (23) +++ | nd ++ | nd nd | nd nd | nd nd | (2250) MC | (15) ++ | (225) MC | (16) ++ | (63.1) ++++ | nd nd |
| 535.1 | As? | 14.7 | 4.4 nd | nd nd | nd nd | nd nd | nd nd | 462 MC | 3.6 ++ | 15.4 +++ | 9.5 + | 10 ++ | nd nd |
| 535.1 | As? | 13.8 | 105 (37) +++ | 2.5 nd + | nd nd nd | nd nd nd | nd nd nd | 501 (1500) MC | 2.9 (14.5) ++ | 127 (200) +++ | 5.9 (10) ++ | 83 (100) ++++ | nd nd nd |
| 535.1 | As? | 10.5 | nd nd ++ | nd nd tr | nd nd nd | nd nd nd | nd nd nd | 404 (2300) MC | 2.1 (14) tr | 84 (180) +++ | 3.0 (6.0) ++ | 83.4 (84.0) ++++ | nd nd nd |
| 535.1 | As? | 13.5 | nd ++ | nd tr | nd nd | nd nd | nd nd | 1001 MC | 2.0 + | 42 +++ | 2.0 tr | 70 +++ | nd nd |
| 535.1 | As? | 9.6 | nd nd | nd tr | nd nd | nd nd | nd nd | 392 MC | 6.3 + | 50 +++ | 3.0 nd | 67.7 +++ | nd nd |
| 535.1/2 | As? | 21.0 | 20.1 | nd | nd | nd | nd | (3190) (23.1) | (266) nd | nd | nd | (71) (18.4) | nd |
| 535.2 | As? | 25.3 | 12.5 11.6 | nd nd | nd nd | nd nd | nd nd | 2145 2386 | 36.0 35.9 | 79.3 54.0 | nd nd | 71.3 61.2 | nd nd |
| 550.1 | Du? (Caesar) | 14.1 | MC | nd | nd | tr | nd | MC | +++ | + | nd | tr | +++ |
| 550.2d | Oppius Du? | 13.5 | +++ | nd | nd | nd | nd | MC | ++ | tr | nd | tr | +++ |
| | ++ Oppius | | % 0.06 | xx) n.i. | | n.i. | n.i. | % 77 | % 0.06 | % 0.19 | | % n.i. | % 0.05 |
| | | | | | | | | | | | | | 22.7 |

TABLE III. INVESTIGATION OF DIDRACHMA TYPE COINAGE³⁴

| Crawford n° | Weight g | Density g/cm ³ | Ag ^x | Au | Bi | Cu | Pb | Sb | Sn | Zn |
|------------------|-------------|------------------------------|-----------------|----------|----------|-----------|------------|------------|--------------|-------------|
| 13.1 | 7.11 | 10.22 | ≈950 MC | ++ | + | +++++ | ++ | nd | tr | nd |
| 26.1 | 6.62 | 10.50 | ≈970 | +++ | nd | ++++ | tr | nd | nd | nd |
| 28.3 | 7.10 | 10.34 | ≈960 | ++ | tr | +++++ | tr | nd | tr | nd |
| 28.3 | 6.27 | 9.76 | 800 | ++ | nd | +++++ | nd | nd | nd | nd |
| 28.4 | 3.05 | 10.20 | ≈950 MC | ++ | nd | ++ | nd | nd | nd | nd |
| 31.1 var. | 5.93 | 9.04 | ~500 MC | ++ | tr | +++++ | tr | nd | nd | nd |
| 31.1 var. | 5.35 | 8.64 | Agxx) >950 | ++ | nd | +++++ | nd | nd | nd | nd |
| (plated) | | | | ++ | nd | +++++ | nd | nd | nd | nd |
| 31.1 var.xxx) | 4.74 | 8.62 | nd +++ | nd nd | nd nd | 508 MC | 9.7 +++ | 11.9 ++ | 51.4 ++++ | 12.5 +++ |

³⁴ x) = = from density; ≈= from micrograph (corroded through) without sign estimated from micrograph (not corroded area).

xx) Fineness of the Ag layer.

xxx) Copper base alloy : quantitative microprobe analysis (0.12 % Ag; nd Au; nd Bi; 90 % Cu; 2.1 % Pb; 0.2 % Sb; 7.7 % Sn, 1.0 % Zn).

TABLE IV. ANALYSIS OF DENARIII³⁵

| Crawford n° | Weight g | Au | Bi | Cu | Pb | remarks |
|----------------|-------------|------|------|-------|------|------------|
| 44.5 | 3.45 | + | nd | +++++ | tr | |
| 106.3c | 4.07 | + | nd | +++ | nd | Sn tr |
| 110.1a | 3.81 | + | nd | ++++ | nd | |
| 113.1 | 3.43 | +++ | + | +++++ | tr | Sn tr |
| | | | < | | | Zn++++ |
| | | 0.58 | 0.06 | 3.1 | 0.72 | ESMA |
| | | | | | | Ag 95 |
| 128.1 | 3.83 | + | nd | +++ | +++ | |
| 130.1 | 4.07 | + | nd | +++ | nd | Sn tr |
| 171.1 | 3.54 | nd | nd | ++++ | nd | Sn+ |
| 197.1a | 4.01 | +++ | nd | +++++ | + | |
| 197.1b | 3.81 | ++ | + | +++ | + | Sn++ |
| 205.1 | 3.96 | ++ | + | +++ | + | Sn tr |
| 210.1 | 3.89 | ++ | tr | +++ | tr | |
| 217.1 | 4.15 | +++ | nd | ++++ | tr | |
| 217.1 | 3.58 | ++ | nd | +++ | nd | |
| 219.1b | 3.94 | +++ | nd | +++++ | tr | Sn tr |
| 222.1 | 4.01 | ++ | + | +++ | + | Sn++ |
| 228.2 | 3.90 | ++ | + | +++ | + | |
| 230.1 | 3.74 | ++ | + | ++ | + | |
| 231.1 | 3.73 | ++ | + | ++++ | + | |
| 234.1 | 3.94 | + | + | ++ | + | |
| 234.1 | 3.80 | ++ | tr | +++ | tr | |
| 235.1a | 3.94 | + | + | ++ | tr | |
| 235.1a | 3.60 | ++ | + | +++ | + | |
| 235.1a | 3.21 | ++ | + | +++ | + | |
| 236.1a | 3.77 | ++ | + | +++ | + | |
| 239.1 | 3.74 | +++ | nd | +++ | tr | |
| 243.1 | 3.88 | +++ | + | ++ | nd | |
| 245.1 | 3.73 | + | + | ++ | + | |
| 252.1 | 3.80 | nd | nd | +++ | nd | |
| 253.1a-c | 3.65 | ++ | tr | +++++ | tr | |
| 257.1 | 3.73 | ++ | nd | ++ | tr | |
| 259.1 | 3.94 | + | nd | ++ | nd | |
| 259.1 | 3.85 | +++ | nd | ++++ | tr | |
| 263.1b | 3.85 | + | nd | +++ | + | |
| 264.1 | 3.89 | + | nd | ++ | nd | |
| 264.1 | 3.88 | + | + | +++ | tr | |
| 266.1 | 3.86 | + | tr | ++ | tr | |
| 269.1 | 3.93 | ++ | + | +++ | + | |
| 273.1 | 3.87 | + | nd | +++ | nd | |
| 273.1 | 3.85 | + | nd | ++ | nd | Sn tr |
| 274.1 | 3.81 | ++ | ++ | ++++ | + | |
| 277.1 | 3.89 | ++ | + | +++ | + | |
| 278.1 | 3.76 | + | tr | ++++ | tr | |
| 280.1 | 3.95 | ++ | tr | +++ | nd | |
| 280.1 (var x) | 3.91 | ++ | tr | +++ | nd | |
| 281.1 | 3.85 | + | nd | ++ | nd | |
| 282.1 xx) | 3.47 | 0.12 | 0.24 | nd | 0.47 | ESMA Ag 99 |
| 282.4 | 3.87 | nd | nd | ++ | nd | |
| 282.4 | 3.83 | nd | nd | + | nd | |
| 282.4 | 3.81 | nd | nd | ++++ | nd | |
| 282.4 | 3.73 | nd | nd | ++ | nd | |
| 282.5 | 3.76 | nd | nd | ++ | nd | |
| 283.1a | 3.72 | ++ | nd | + | tr | Sn tr |
| 283.1a | 3.62 | tr | tr | ++++ | tr | |
| 285.2 | 3.82 | nd | tr | +++ | nd | |
| 286.1 | 3.92 | nd | nd | +++ | nd | |
| 287.1 | 3.80 | ++ | + | +++ | + | |
| 289.1 | 3.68 | nd | tr | ++ | + | |
| 290.1 | 3.90 | + | tr | ++++ | tr | |
| 290.1 | 3.67 | nd | nd | ++ | nd | Sn tr |

³⁵ x) plated, analysis on silver layer.

| Crawford n° | Weight g | Au | Bi | Cu | Pb | remarks |
|----------------|-------------|------|--------|-------|--------------|------------|
| 291.1 | 3.99 | tr | tr | ++ | + | |
| 292.1 | 3.89 | tr | tr | +++ | nd | |
| 293.1 | 3.83 | + | nd | ++ | nd | |
| 294.1 | 3.89 | + | nd | ++ | nd | |
| 296.1k | 3.70 | + | + | +++ | tr | |
| 296.1k | 3.50 | + | + | ++ | + | |
| 297.1a | 3.81 | tr | tr | ++ | + | Sn tr |
| 298.1 | 3.96 | + | tr | + | tr | |
| 298.1 | 3.34 | nd | tr | + | tr | |
| 299.1a | 3.75 | +++ | tr | ++ | tr | |
| 301.1 | 3.97 | + | nd | +++ | nd | Sn+ |
| 301.1 | 3.95 | + | nd | +++ | nd | |
| 302.1 | 3.09 | ++ | tr | MC | tr | Sn+ |
| 303.1 | 3.83 | nd | tr | +++++ | tr | |
| 304.1 | 3.74 | ++ | tr | ++++ | nd | |
| 305.1 | 3.94 | + | nd | +++ | nd | |
| 305.1 | 3.88 | +++ | tr | +++ | nd | |
| 306.1 | 3.76 | nd | nd | +++ | nd | |
| 307.1b | 3.86 | + | + | ++ | + | |
| 308.1b | 3.27 | ++ | tr | ++++ | + | |
| 311.1a | 3.82 | nd | nd | ++ | nd | |
| 312.1 | 3.87 | +++ | nd | +++++ | nd | |
| 313.1b | 3.84 | + | nd | +++ | nd | |
| 313.1c | 3.84 | nd | nd | MC | nd | Sntr |
| 314.1c | 3.90 | + | nd | + | tr | Sntr |
| 314.1c | 3.44 | nd | tr | +++ | tr | |
| 316.1 | 3.70 | +++ | tr | +++ | tr | |
| 319.1 | 3.72 | +++ | ++ | +++++ | ++ | Sntr |
| 320.1 | 3.93 | tr | nd | ++ | tr | |
| 320.1 | +++ | nd | | ++ | ++ | Sntr |
| 321.1 | 3.87 | ++ | tr | +++++ | nd | |
| 321.1 | 3.78 | 0.11 | < 0.06 | 1.17 | 0.75 | ESMA Ag 96 |
| 322.1b | 3.89 | ++ | tr | +++ | nd | |
| 322.1b | 3.82 | + | nd | ++ | nd | |
| 323.1 | 3.75 | ++ | nd | ++++ | nd | |
| 324.1 | 3.96 | ++ | nd | +++ | nd | |
| 325.1a | 3.73 | + | nd | +++ | nd | |
| 325.1a | 3.72 | ++ | nd | ++++ | nd | |
| 326.1 | 3.72 | + | nd | tr | nd | |
| 327.1 | 3.86 | nd | nd | ++ | nd | |
| 328.1 | 3.63 | ++ | tr | +++ | nd | |
| 335.1a | 3.85 | ++ | tr | ++ | tr | |
| 335.3a | 3.78 | nd | nd | ++ | nd | |
| 335.9 | 3.88 | nd | nd | ++++ | tr | |
| 341.1 | 4.16 | + | nd | ++ | nd | |
| 342.2 | 3.90 | ++ | nd | ++++ | nd | |
| 342.5a | 3.96 | ++ | nd | +++++ | tr | |
| 342.5a | 3.83 | + | nd | +++ | + | |
| 342.5b | 3.81 | ++ | nd | ++++ | tr | |
| 344.1b | 3.94 | + | tr | ++ | nd | |
| 344.1b | 3.77 | + | nd | ++ | tr | Sntr |
| 344.2b | 3.93 | + | nd | ++ | tr | |
| 344.3 | 3.88 | nd | ++ | ++ | tr | |
| 345.1 | 3.30 | ++ | tr | ++++ | + | Sn++ |
| | | ++ | tr | ++++ | + | Sntr |
| 346.1a | 3.67 | +++ | nd | +++++ | nd | |
| 346.1c | 3.58 | ++ | nd | +++++ | tr | Sntr |
| 348.2 | 3.84 | ++ | nd | ++++ | nd | Sntr |
| 348.3 | 3.90 | +++ | tr | +++++ | tr | |
| 350.2 | 4.00 | + | nd | ++++ | nd | |
| 352.1a | 3.95 | ++ | + | +++ | tr | Sn+ |
| | 0.35 | 0.27 | 2.8 | 0.75 | ESMA Ag96 | |
| 352.1a | 3.81 | ++ | tr | ++ | tr | ESMA |
| | | 0.26 | < 0.06 | 1.8 | 0.52 | Ag94 |
| 352.1b | 3.60 | ++ | tr | ++++ | tr | Sntr |
| 352.1c | 4.00 | ++ | tr | ++++ | tr | Sntr |
| 353.1a | 3.65 | ++ | nd | ++++ | nd | |
| 353.1a-c | 3.65 | ++ | tr | ++++ | tr | |

| Crawford n° | Weight g | Au | Bi | Cu | Pb | remarks |
|----------------|-------------|-----|----|-------|----|-------------|
| 354.1 | 3.76 | +++ | tr | MC | nd | |
| 355.9 | 3.88 | nd | nd | ++++ | tr | |
| 356.1a | 3.96 | ++ | tr | ++++ | tr | |
| 356.1a | 3.95 | ++ | tr | ++++ | tr | Sntr |
| 359.2 | 3.82 | ++ | tr | +++ | nd | |
| 361.1a | 3.97 | + | nd | ++++ | tr | |
| 362.1 | 4.09 | + | nd | ++++ | tr | |
| 363.1d | 3.98 | + | nd | ++++ | tr | Sntr |
| 363.1d | 3.81 | ++ | tr | ++++ | tr | Sntr |
| 364.1b | 3.87 | + | tr | +++ | tr | |
| 365.1 | 3.81 | + | nd | +++ | nd | |
| a-b | | | | | | |
| 367.3 | 3.60 | +++ | + | +++ | + | Sn+++ |
| 371.1 | 2.60 | ++ | nd | +++ | nd | |
| 372.2 | 3.86 | ++ | tr | ++++ | tr | |
| 374.1 | 3.83 | ++ | tr | ++ | + | Sntr |
| 374.2 | 3.96 | ++ | + | ++++ | + | |
| 377.1 | 3.79 | + | nd | +++ | nd | |
| 378.1c | 3.91 | ++ | tr | +++ | + | Sntr |
| 378.1c | 3.83 | + | nd | +++ | tr | |
| 379.1 | 3.58 | + | tr | +++ | + | Sntr |
| 380.1 | 3.14 | + | nd | ++++ | tr | |
| 382.1a | 3.83 | + | tr | +++ | tr | |
| Av 382 | 3.02 | ++ | + | +++++ | tr | Sn+ |
| Rv 384 | | | | | | |
| 384.1 | 3.57 | + | tr | +++ | tr | |
| 385.4 | 3.89 | + | + | ++++ | + | |
| 386.1 | 4.04 | + | tr | +++ | + | |
| 386.1 | 3.81 | + | tr | ++ | + | |
| 388.1b | 3.78 | ++ | + | ++++ | + | |
| 390.1 | 3.99 | + | tr | ++++ | tr | |
| 390.1 | 3.47 | + | nd | ++++ | tr | |
| 391.2 | 3.85 | ++ | ++ | MC | ++ | Sntr |
| 392.1a | 3.94 | + | tr | ++++ | tr | |
| 392.1a | 3.93 | + | ++ | ++++ | ++ | |
| 393.1a | 3.81 | + | tr | ++ | + | Sntr |
| 394.1b | 3.81 | + | + | +++ | + | |
| 401.1 | 3.97 | ++ | nd | ++++ | tr | Sntr |
| 405.1b | 3.81 | ++ | nd | MC | tr | |
| 405.5 | 3.71 | +++ | nd | MC | tr | |
| 409.1 | 3.93 | ++ | tr | +++ | + | |
| 410.1 | 3.63 | + | nd | ++++ | nd | |
| 410.8 | 3.34 | ++ | nd | +++ | + | |
| 410.9b | 3.55 | ++ | nd | ++++ | nd | |
| 412.1 | 3.65 | ++ | + | ++ | + | Sntr |
| 413.1 | 4.00 | + | nd | +++ | tr | |
| 415.1 | 4.00 | + | nd | ++++ | nd | |
| 416.1a | 3.86 | + | nd | +++++ | nd | Sntr |
| 421.1 | 4.10 | + | nd | ++++ | tr | |
| 421.1 | 3.96 | + | nd | ++++ | tr | |
| 422.1b | 3.89 | ++ | nd | +++ | + | |
| 422.1b | 3.59 | ++ | nd | ++ | tr | |
| 423.1 | 3.83 | + | nd | ++++ | tr | |
| 424.1 | 3.26 | ++ | nd | MC | ++ | Sn+ Zntr |
| 425.1 | 3.97 | + | nd | ++++ | nd | |
| 425.1 | 3.80 | + | nd | ++++ | tr | |
| 426.1 | 4.03 | +++ | nd | ++++ | nd | |
| 428.2 | 4.03 | + | nd | +++ | + | |
| 428.2 | 3.51 | +++ | nd | ++++ | + | |
| 428.3 | 3.64 | + | nd | +++ | nd | |
| 429.1 | 3.86 | ++ | nd | +++ | tr | |
| 429.1 | 3.68 | +++ | nd | ++++ | tr | |
| 429.2b | 3.37 | + | tr | ++++ | nd | |
| 430.1 | 3.68 | ++ | nd | ++++ | nd | |
| 431.1 | 3.73 | ++ | nd | ++++ | nd | |
| 433.1 | 4.05 | + | nd | +++ | nd | |
| 433.1 | 3.55 | ++ | nd | ++++ | nd | |

| Crawford n° | Weight g | Au | Bi | Cu | Pb | remarks |
|----------------|-------------|-----|----|-------|-----|---------|
| 433.2 | 4.07 | + | nd | ++ | nd | |
| 433.2 | 4.00 | ++ | nd | ++++ | tr | |
| 434.2. | 3.80 | + | nd | +++ | nd | |
| 434.2 | 3.76 | ++ | nd | ++++ | nd | |
| 439.1 | 3.65 | nd | nd | ++++ | tr | |
| 440.1 | 3.39 | ++ | nd | +++ | + | Sn+ |
| 442.1a | 3.96 | ++ | nd | +++ | + | |
| 442.1a | 3.88 | + | nd | ++++ | nd | |
| 443.1 | 3.77 | ++ | nd | ++++ | nd | |
| 443.1 | 3.61 | +++ | tr | +++++ | tr | |
| 444.1a | 3.73 | ++ | nd | ++++ | tr | |
| 444.1a | 3.72 | +++ | tr | +++++ | tr | Sntr |
| 445.2 | 3.72 | ++ | nd | +++ | nd | |
| 446.1 | 4.02 | + | nd | ++++ | nd | |
| 448.1a | 4.23 | + | nd | ++++ | tr | |
| 448.1a | 3.74 | + | nd | +++ | tr | Sntr |
| 449.1a | 3.97 | + | nd | ++++ | tr | |
| 449.2 | 3.85 | + | nd | ++ | nd | |
| 449.3a | 3.61 | +++ | ++ | MC | +++ | Sn+++ |
| 450.1a | 3.72 | ++ | nd | ++++ | tr | |
| 450.2 | 3.78 | + | nd | ++++ | tr | |
| 450.3a | 3.78 | + | nd | ++++ | tr | |
| 451.1 | 3.78 | ++ | nd | ++++ | + | |
| 452.2 | 3.60 | ++ | + | ++++ | tr | |
| 452.2 | 3.41 | ++ | + | +++ | + | Sntr |
| 458.1 | 3.93 | ++ | nd | ++++ | nd | |
| 458.1 | 3.65 | ++ | nd | ++++ | + | |
| 459.1 | 3.90 | +++ | + | +++ | + | Sn+++ |
| 463.1a | 4.18 | ++ | nd | +++ | + | Sntr |
| 463.1a | 4.07 | + | nd | +++ | tr | |
| 463.1a | 3.95 | ++ | tr | ++++ | + | Sn++ |
| 463.1a | 3.56 | + | tr | ++++ | tr | |
| 463.1b | 3.66 | ++ | nd | +++ | tr | Sn+ |
| 463.3 | 3.72 | ++ | nd | ++++ | tr | Sntr |
| 464.2 | 2.85 | +++ | + | +++ | ++ | Sn+ |
| 464.3a | 4.11 | ++ | nd | ++++ | tr | |
| 464.4 | 3.95 | ++ | tr | ++ | tr | Sn+ |
| 464.4 | 3.74 | + | tr | ++ | + | Sntr |
| 464.4 | 3.56 | ++ | tr | ++ | + | Sn+ |
| 467.1a | 3.26 | ++ | nd | +++ | tr | Sn+ |
| 467.1b | 3.63 | + | nd | ++++ | tr | |
| 468.1 | 3.97 | ++ | + | +++ | nd | |
| 468.1 | 3.79 | ++ | + | ++++ | + | |
| 468.1 | 2.50 | + | nd | ++++ | tr | |
| 468.1x) | 2.13 | ++ | nd | +++ | + | |
| 469.1c | 3.81 | + | nd | ++++ | tr | |
| 473.1 | 3.52 | ++ | nd | ++ | nd | |
| 474.1a | 4.09 | ++ | nd | +++ | + | Sntr |
| 474.3a | 3.81 | + | nd | ++ | tr | |
| 480.2a | 3.94 | ++ | + | ++++ | ++ | Sn+ |
| 480.5b | 3.71 | ++ | tr | ++++ | tr | Sn+ |
| 480.11 | 3.64 | ++ | tr | ++++ | + | Sn+ |
| 480.22 | 3.77 | + | nd | ++++ | + | |
| 483.2 | 3.53 | ++ | tr | ++++ | + | Sn+ |
| 486.1 | 3.67 | +++ | nd | MC | + | Sn+ |
| 487.1 | 4.04 | ++ | nd | ++++ | tr | Sntr |
| 487.2a | 3.94 | ++ | nd | ++++ | tr | Sntr |
| 488.2 | 3.72 | + | nd | MC | nd | |
| 488.2 | 3.68 | + | + | +++ | + | Sntr |
| | | + | + | +++ | + | Sntr |
| 488.2 | 3.66 | ++ | + | ++ | tr | Sntr |
| 494.23 | 3.72 | ++ | tr | +++ | + | Sn+ |
| 494.28 | 3.92 | + | nd | +++ | tr | |
| 494.30 | 3.62 | + | nd | ++++ | tr | |
| 494.36 | 3.70 | + | nd | ++++ | nd | |
| 494.38 | 3.46 | ++ | + | +++ | + | Sn+ |
| 494.42a | 3.53 | + | nd | ++++ | tr | |
| 494.43b | 3.60 | ++ | nd | ++++ | tr | |
| 496.1 | 3.30 | +++ | tr | +++++ | tr | |

| Crawford n° | Weight g | Au | Bi | Cu | Pb | remarks |
|----------------|-------------|------|----|-------|----|--------------|
| 496.2 | 3.61 | ++ | tr | ++++ | + | Sn+ |
| 496.3 | 3.31 | + | + | +++ | tr | |
| 500.3 | 3.62 | + | nd | +++ | nd | |
| 502.2 | 3.07 | + | nd | ++++ | tr | |
| 506.2 | 3.71 | + | nd | ++++ | + | |
| 511.2c | 3.81 | +++ | tr | MC | + | |
| 511.3a | 3.56 | +++ | tr | ++++ | + | |
| 511.4a | 3.81 | +++ | nd | +++ | nd | |
| 512.2 | 3.54 | + | tr | +++ | tr | Sntr |
| 512.2 | 3.50 | ++ | tr | ++++ | tr | Sntr |
| 513.2 | 3.20 | ++ | tr | ++++ | + | Sn+ |
| 516.2 | 3.74 | +++ | nd | ++++ | tr | |
| 517.2 | 3.87 | ++ | nd | ++++ | nd | |
| 517.2 | 3.78 | ++ | nd | ++++ | nd | |
| 519.2 | 3.86 | + | nd | +++ | tr | |
| 521.2 | 3.36 | +++ | tr | MC | + | |
| 523.1a | 3.55 | ++ | tr | ++++ | + | Sn+ |
| 525.2 | 3.59 | +++ | tr | ++++ | tr | Sntr |
| 529.2b | 3.61 | +++ | nd | +++++ | ++ | |
| 533.2 | 3.78 | ++ | tr | ++++ | tr | Sntr |
| 536.2 | 3.38 | ++ | tr | ++++ | tr | Sn++ |
| 538.1 | 3.65 | ++ | nd | ++++ | nd | |
| 540.2 | 3.95 | ++ | nd | ++++ | tr | |
| 540.2 | 3.60 | ++ | nd | +++ | + | |
| 544.14 | 3.39 | ++ | nd | +++ | tr | Sn+ |
| 544.14 | 3.42 | + | nd | ++++ | tr | |
| 544.14 | 2.97 | + | nd | ++++ | tr | |
| 544.17 | 3.42 | ++ | + | ++++ | ++ | Sntr |
| 544.18 | 2.94 | ++ | nd | +++ | tr | Sn+ |
| 544.19 | 3.17 | ++ | tr | MC | + | Sbtr Sntr |
| 544.10 | 3.49 | ++ | tr | +++ | + | |
| 544.20 | 3.24 | ++ | + | ++++ | ++ | Sn+ |
| 544.20 | 2.93 | +++ | + | MC | ++ | Sn++ |
| 544.21x) | 3.10 | + | + | MC | + | |
| 544.23 | 2.69 | ++ | + | MC | ++ | Sn++ |
| 544.26 | 2.60 | 0.30 | nd | 25 | nd | ESMA Ag75 |
| 544.27 | 2.97 | ++ | + | ++++ | + | |
| 544.29 | 2.99 | ++ | + | MC | + | |
| 544.30 | 3.61 | +++ | + | ++++ | + | Sntr |
| 544.33 | 3.55 | ++ | + | MC | ++ | Sntr |
| 544.35 | 3.67 | + | nd | ++++ | tr | |
| 544.37 | 3.50 | ++ | tr | ++++ | tr | |
| 544.37 | 3.31 | ++ | tr | ++++ | + | |
| 544.37 | 3.11 | + | tr | ++++ | + | |
| 544.38 | 3.71 | ++ | tr | +++++ | + | Sn++ |
| 545.1 | 3.66 | +++ | nd | +++++ | tr | Sntr |

TABLE V. ANALYSIS OF *VICTORIATI*, *QUINARII* AND *SESTERTII*³⁶

| Crawford | Weight | Au | Bi | Cu | Pb | remarks |
|-------------------|--------|-----|----|-------|----|----------------|
| <i>Victoriati</i> | | | | | | |
| 44.1 | 3.27 | +++ | tr | +++++ | + | |
| 44.1 | 2.32 | + | tr | +++++ | + | Astr M Ag60 |
| 53.1 | 3.15 | +++ | tr | +++++ | nd | Sntr |
| 89.1b | 2.90 | ++ | nd | MC | nd | |
| | | ++ | nd | MC | nd | |
| 91.1b var.xx) | 2.73 | +++ | nd | MC | + | M Ag80 |
| 97.1b | 3.17 | +++ | tr | ++++ | tr | |
| 120.1 | 2.86 | +++ | + | MC | + | Sntr M Ag90 |

36 x) Metallographic investigation M.
xx) plated, analysis on silver player.

| Crawford | Weight | Au | Bi | Cu | Pb | remarks |
|------------|--------|-------|-------|-------|------|-----------------------|
| Quinarii | | | | | | |
| 44.6 | 2.11 | ++ | nd | +++ | + | |
| 333.1 | 1.90 | + | + | +++ | + | Sn+ |
| 333.1 | 1.84 | tr | nd | ++++ | nd | |
| 333.1 | 1.83 | + | ++ | ++++ | tr | |
| 341.3 | 1.83 | +++ | +++ | MC | ++ | Astr Sn+ M Ag72 |
| 343.2a | 1.97 | ++++ | + | +++++ | + | Sn+ |
| 343.2a | 1.62 | ++ | ++ | MC | + | Sn+ |
| | | ++++ | + | +++++ | + | Sn+ M Ag85 |
| 343.2b | 1.97 | ++++ | tr | +++++ | + | Sn+ |
| 345.2 xxx) | 1.42 | 0,24 | 0,06 | 8,0 | 0,5 | ESMA Ag90 |
| 348.4 | 1.52 | +++ | + | +++++ | ++ | |
| 348.4 | 1.30 | +++ | +++ | MC | +++ | Sn+++ |
| | | <0.05 | <0.06 | 37.5 | 0.65 | ESMA Ag58 |
| 373.1b xx) | 1.93 | 0.51 | 0.73 | 27 | 1.70 | ESMA Ag71 |
| 462.2 | >1.53 | ++ | nd | ++++ | + | |
| 489.3 | 1.80 | + | nd | +++++ | nd | Zntr |
| 489.4 | 1.78 | + | nd | +++++ | tr | Sn++ |
| 489.6 | 1.87 | + | nd | +++ | + | Sntr |
| 489.6 | 1.83 | ++ | nd | +++ | + | Sntr |
| 489.6 | 1.68 | + | nd | +++ | tr | Sn+ |
| 529.4b | 1.95 | ++ | nd | ++++ | nd | |
| Sestertii | | | | | | |
| 44.7 | 1.00 | ++ | nd | ++++ | tr | |
| 44.7 | 0.99 | ++ | nd | ++++ | tr | |
| 44.7 | 0.95 | ++ | nd | ++++ | nd | |

Aes rude : forme standartizzate a Carsoli ?

Donatella FERRETTI*

Nel Museo Nazionale di Chieti in Abruzzo si trovano novantasette frammenti di *aes rude* provenienti dalla stipe di Carsoli. Il loro peso complessivo è di 2.750 kg passando dal peso minimo di 2,07 g al massimo di 362,2 g. L'ammontare del peso non coincide con quello indicato nelle *Notizie Scavi* del 1951¹ che presentano in via preliminare il complesso dei materiali scavati non stratigraficamente tra cui erano molte terrecotte votive, ceramica, ferro, statuette di bronzo, ambra, osso, piombo, monete romano-campane e delle serie di bronzo romano fuse e coniate, poi esemplari di zecche meridionali e Sicilia. I numerosi ritrovamenti di *aes rude* hanno sempre più attirato l'attenzione degli studiosi tanto da auspicare una schedatura sistematica al fine di chiarire alcuni problemi che questo materiale solleva; l'accumulo di metallo grezzo trovato a Carsoli anche se non è quantitativamente significativo permette alcune considerazioni. Il significato del complesso non è ambiguo : trattasi di un deposito votivo in cui il metallo ritrovato non può essere considerato come «scoria di fusione», né relegato ad una funzione religiosa che non implichi anche un valore «in se» dei pezzi. Le condizioni storiche, culturali, economiche della società italiana antica, almeno in alcune zone, giustificano e dimostrano sempre più chiaramente attraverso le fonti e i ritrovamenti l'utilizzo del metallo pesato come misura del valore esistente prima dell'introduzione della moneta. Da menzionare l'opinione di Crawford² secondo cui Servius Tullius fu il creatore di un unità metallica designata attraverso un certo peso di bronzo grezzo equivalente ad una libbra. Interessante Festo³ che menziona il *piscatorium aes vetusto more appellatur quod in Monte Albano datur pro piscibus*, una notizia in più sul metallo usato nella sua funzione di equivalente. Sottolineano il significato dell'*aes rude* come forma di circolazione-premonetaria i ritrovamenti in ripostigli tombe e stipi votive, anche se di volta in volta l'interramento circoscrive una differente situazione. Il problema principale rimane sempre lo stesso : quale fu l'unità ponderale, individuabile dai singoli pezzi studiati, che regolò l'uso del metallo a peso? Fino ad ora ogni indagine è risultata negativa. Il De Rossi⁴ pensò per primo che l'uso della bilancia non fosse sempre necessario perché il peso del metallo poteva essere immediatamente individuato attraverso una forma facilmente riconoscibile. Si è cercato di verificare questa ipotesi attraverso la classificazione tipologica degli *aes rude* di Carsoli, ben consci che una tale analisi non può essere risolutiva, specie in una fase iniziale come questa in cui fare confronti è difficilissimo mancando quasi sempre dati completi. L'analisi ponderale dei novantasette frammenti dimostra che il numero maggiore degli esemplari è situato tra gli 11 g e i 16 g (29 esemplari); i frammenti aventi uguale peso (8 esemplari) sono tutti di forma diversa; solo in un caso un frammento (n°3 : 30,73 g) sembra pesare il doppio di un altro (n°1 : 15,60 g) e anche la forma è la stessa. Un terzo di forma similissima pesa invece 12,87 g (n°79).

La maggioranza dei frammenti è informe : 78 esemplari su 97. Dei 19 restanti, un solo pezzo è chiaramente derivato da una forma rettangolare o quadrata e pesa 28,29 g (n°42). Due sono frammenti di una forma semicircolare : 15,49 g (n°5) e 12,99 g (n°6), quest'ultimo ha due incisioni parallele su di una faccia. Questi due frammenti anche se di

* Roma.

1 A. CEDERNA, *Carsoli. Scoperta di un deposito votivo del III A.C.*, in *NotScavAnt*, s. 8, 5, 1951, p. 169-224.

2 M.H. CRAWFORD, *The Early Roman Economy 753-280 B.C.*, in *Mélanges Heurgon*, I, Roma, 1976, p. 197 sgg.

3 Sexti Pompei Festi, *De verborum significatu quae supersunt cum Pauli epitome*, Lipsiae, 1913, p. 230.

4 M.S. DE ROSSI, *Pezzi di aes rude definito e le asce di bronzo adoperate come valore monetale*, in *Dissertazioni della Pontificia Accademia di Archeologia*, serie 2, vol. 2, 1886, Roma, p. 454 sg.

peso diverso hanno spessore, larghezza e altezza uguali. Il numero 23 è informe ed ha un'incisione verticale nel mezzo, pesa 33,81 g. Due frammenti sono di forma circolare e pesano 6,60 g (n°12) e 25,42 g (n°13). Il n°47 di 40,16 g presenta un segno somigliante ad un fiore a quattro petali. Altre forme rintracciabili sono la triangolare di cui si hanno due esemplari : 33,39 g (n°14) e 13,35 g (n°92).

Due frammenti sono di forma ovale anche se irregolare : 22,03 g (n°51) e 15,20 g (n°91). Cinque frammenti sono di forma rettangolare, anche se piuttosto rovinati : 24,46 g (n°34); 14,27 g (n°67); 8,82 g (n°80); 11,27 g (n°86); 16,12 g (n°87).

In definitiva gli addensamenti di peso risultano insufficienti per l'individuazione di una unità ponderale di base e le forme cosiddette standartizzate sono in quantità non preponderante ma tale da incuriosirci, farci venire qualche dubbio. Considerando la situazione storica di Carsoli, colonia latina in territorio un tempo appartenente agli Equi, verrebbe fatto di pensare che il sistema ponderale a cui agganciare i «bronzi» recuperati sia stato quello usato a Roma. Ma questa equazione non dà risultati. Si può pensare a misure locali o visto il caso di un santuario al ruolo avuto da pellegrini transitanti. Appare conseguentemente difficile chiarire la situazione ponderale in un contesto così variegato come a Carsoli, così come in altre stipi votive.

Anche la datazione non è puntuale, non sigilla un determinato momento, ma è diluita nel tempo. Altrove (Forcello, Cattani)⁵ anche se in una diversa situazione storica, topografica, economica è stato possibile individuare delle forme precise : porzioni di lingotto, di verga, formelle circolari, a cuneo e anche delle uguaglianze ponderali così come diversi contrassegni.

Sarebbe stato interessante avere anche i dati sui frammenti informi. Le fonti riguardanti offerta di metallo nei santuari sono tra le altre : Livio XXVI, 119 e Tacito *Histor.*, IV, 53 e la consuetudine è testimoniata dai numerosi ritrovamenti in stipe : pagamenti per un favore ricevuto, doni propiziatori ad una divinità, in ogni caso pezzi di metallo sicuramente portatori di un valore anche se ancora non individuabile precisamente. Se poi come sembra i pezzi dovevano essere di volta in volta ammassati e pesati per raggiungere una determinata unità di peso, la stipe di un santuario è un contesto difficile da interpretare, perché potrebbe essere plausibile che l'offerente non pesasse ogni volta con la bilancia una precisa quantità di metallo ma depositasse più semplicemente un singolo pezzo privo in sé di un preciso valore ponderale. Volendo provare a fare dei confronti con delle stipi vicine da un punto di vista topografico e cronologico (IV-III a.C.), anche se non sempre di composizione, si può considerare la stipe di Tivoli⁶ che presenta anch'essa oltre a terracotta votiva, materiale monetario : *aes rude*, *aes signatum*, *aes* grave fuso, romano campane coniate, monete cioè provenienti da Italia Centrale, Campania e Apulia. Alcuni paesi di *aes rude* coincidono con quelli di Carsoli ma in piccola percentuale, molti altri se non discostano per meno di un grammo e il confronto tipologico non può essere qui come altrove, minimamente indicativo mancando a Tivoli l'elenco compiuto dei pesi, i disegni, le foto. La stessa stipe di Tivoli è vicina per composizione a quella di Norba (IV-III a.C.)⁷ che contiene un centinaio di pezzi di *aes rude*, tra i quali anche qui ci sono delle uguaglianze ai pesi di Carsoli, romano campane, romano semilibrali, romane della riduzione sestantaria, bronzi onciali e semionciali, monete d'argento. Ancora nella stipe della Via Tiberina (IV-II a.C.)⁸ troviamo pesi coincidenti a quelli di Carsoli, ma come al solito i dati vanno presi con molta cautela non essendo il criterio di edizione dei pezzi recuperati sempre omogeneo e non essendo il più delle volte completo. Sarebbe interessante estendere il confronto ad altre stipi votive, ma il dato di fatto è che la documentazione finora disponibile è inadeguata e perciò i dati provenienti da Carsoli sono destinati a restare isolati fintanto che non si sarà svolto lo

⁵ M. CATTANI, *Aes rude*, in *Gli Etruschi a nord del Po*, I, Mantova, 1988, p. 201, 203.

⁶ S.L. CESANO, *Tivoli*, in *NotScavAnt*, s. 5; 3, 1927, p. 249-256.

⁷ *Ibidem*.

⁸ *Ibidem*.

studio globale e sistematico delle stipi e dei ripostigli che furono indagati non accuratamente in passato.

Se non si riprenderà l'esame di tutti i pezzi di *aes rude* da stipi e da ripostigli con presenza di monete per cercare di avere un panorama più completo possibile dei pesi, i dubbi rimarranno gli stessi. La riconsiderazione dei pezzi di *aes rude* che per associazione con monete sembrano essere stati interrati per la loro funzione di equivalenti va portata avanti attraverso lo studio dei pesi e dei tipi, quest'ultimi qui a Carsoli hanno dato alcune indicazioni che possono sembrare sterili solo perché prive di agganci con altre situazioni analoghe. Lo scopo sarebbe di rilevare prima la fenomenologia del singolo ritrovamento, poi fare il confronto all'interno della regione e poi ancora allargarsi al di fuori della regione di appartenenza.

La possibilità di esaminare il materiale di Carsoli vorrebbe essere solo il principio di un programma di studio il più possibile teso a coprire il versante tirrenico a quello adriatico, partendo dall'Italia centrale e che non presupponga più laconici inventari di materiali.

Les fausses certitudes de la numismatique républicaine du III^e siècle

à Fiorenzo Catalli, en souvenir du Congrès de Bruxelles 1991

Patrick MARCHETTI*

L'inventaire du monnayage républicain dû à M. Crawford risque de paralyser pour longtemps la recherche, si l'on retient pour fondée la chronologie proposée, alors que jusque loin dans le II^e siècle les dates restent incertaines : ainsi, par exemple, pour l'introduction du quadrigat en 225, ou le début du denier en 211, ou encore toutes les étapes antérieures (280, 275, 270...) aussi bien que postérieures (208, 195...)¹. Certains numismates en sont conscients, mais beaucoup, en cédant à la facilité qui consiste à recourir à un instrument universel de référence, pourraient être abusés. La numismatique du III^e siècle a en fait besoin de nouveaux repères, plus fiables. Et sur ce terrain Fiorenzo Catalli² a raison de battre en brèche nos fausses certitudes au point même qu'il me paraît raisonnable, *par méthode – comme l'on pratique le doute systématique – et provisoirement*, d'oublier le système chronologique qui nous est proposé par M. Crawford afin d'éviter au cours du réexamen de s'enfoncer dans des ornières. Il vaut, en effet, la peine de méditer sur les erreurs passées : dans la foulée de ceux qui, à juste titre, ont brisé le carcan plinien qui amenait à dater le denier proprement dit de 269³, n'en est-

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1 La fin de la deuxième guerre punique, un événement majeur s'il en est, est noyée dans une période de dix ans qui va de 206 à 195 ! Le témoignage des trésors ne doit pas ici faire illusion : il reste aléatoire pour toute la première moitié du II^e siècle, comme le savent tous ceux qui ont un jour cherché à vérifier le classement de M. Crawford. D'anciennes erreurs en ce domaine, qui ont été entérinées par M. Crawford, peuvent devenir ruineuses, ainsi les datations des trouvailles de Numance ou des deniers du trésor d'Agrinion.

2 F. CATALLI, *Rinvenimenti monetali in Italia Centrale*, dans *Dialoghi di Archeologia*, s. 3, 8, 1990/2, p. 67-75. Les ensembles signalés par notre confrère appellent l'attention. Je ne doute pas qu'il faille en retenir un nouveau cadre pour l'ensemble de la production monétaire. Pour que ces associations de matériel prennent tout leur sens, il conviendrait toutefois de ne pas forcer les «évidences», par exemple en vieillissant systématiquement la date de déposition des objets en fonction de l'époque la plus haute à laquelle leur fabrication aurait commencé. Tout excès en ce domaine affaiblit la démonstration, d'autant que nous avons par ailleurs bien des raisons d'être inquiet, ainsi à lire dans un article récent que certains attendent «una nuova Morgantina che possa retrodatare il denaro», cf. *Survey of Numismatic Research 1885-1990*, Bruxelles, 1991, p. 181. Est-il raisonnable lorsqu'on appelle l'archéologie à son secours d'ignorer les découvertes de Morgantina ? Dans le même ordre d'idées, on relèvera les propos ambigus de F. PANVINI ROSATI, *Nuove osservazioni sulla monetazione etrusca*, dans *NAC*, 14, 1985, p. 147 : en prétendant que la date de 214-212 avancée pour le denier ferait toujours l'objet de vives controverses, on s'arroge le droit de n'en plus tenir compte, sans autre forme de procès !

3 À cette date de 269 on revient toutefois par une interprétation audacieuse du texte de Pline, dont on propose d'identifier le *denarius* avec un didrachme romano-campanien : l'équivalence de ce *denarius* en monnaies de bronze aurait alors été déterminée par rapport à des unités de compte en argent d'une valeur de dix as libraux, cf. V. PICOZZI, *Q. Ogulnio C. Fabio cos.*, dans *NAC*, 8, 1979, p. 159-171, et les prolongements chez E. LO CASCIO, *Il primo denarius*, dans *AIIN*, 27-28, 1980-1981, p. 335-357. Cf. H. ZEHNACKER, *Pline l'Ancien, Histoire Naturelle. XXXIII (Collection des Universités de France)*, Paris, 1983, p. 153. Nonobstant de sérieuses réserves, l'idée de V. Picozzi peut paraître d'autant plus intéressante qu'elle serait confirmée en quelque sorte par les réalités mêmes du monnayage de Populonia. Cfr *La métrologie des monnaies étrusques avec marques de valeur*, dans *Contributi introduttivi allo studio della monetazione etrusca. Atti del V Convegno del Centro Internazionale di Studi Numismatici Napoli 1975*, Roma, 1976, p. 273-310 (cf. Fr.-H. MASSA-PAIRAULT, *Problèmes du monnayage étrusque*, dans *AIIN*, 27-28, 1980-1981, p. 301-334), malgré les réserves de M. CRISTOFANI, *La monetazione etrusca dieci anni dopo il Convegno di Napoli*, dans *AIIN*, 36, 1990, p. 89. Il n'est pas possible de répondre ici aux propositions surprenantes qui ont vu le jour en matière de chronologie monétaire étrusque. Toute

on pas venu à proposer une autre théorie tout aussi erronée qui le plaçait en 187 ? La solution – Morgantina l'a démontré et sur ce point R. Thomsen⁴ en a patiemment amassé les preuves – est dans le «juste milieu». Mais il reste des nostalgiques.

Si les catalogues prématurés – songeons à Babelon, Grueber, Sydenham – sont une fatalité de la numismatique républicaine, d'autres écueils devraient être évités avec grand soin, notamment le recours trop systématique à l'argument d'autorité. Le danger est réel aujourd'hui d'être tenté de glaner ici et là arguments, contre-épreuves, réfutations, affirmations et suggestions de toutes espèces, au risque d'empêtrer les problèmes dans un plus grand désordre d'idées, par exemple en préférant le système Babelon ou

la série des monnaies attribuées à Populonia a «bénéficié» de l'étonnante découverte d'un didrachme au type du Gorgoneion marqué X faite à Prestino dans une couche datée de la période Golasecca III A, soit du Ve siècle (cf. *Studi Etruschi*, 50, 1985, p. 506-509, et *Civiltà degli Etruschi*, Milan, 1985, p. 238, n. 4). Je ne puis trop souligner pourtant à quel point une telle découverte est en contradiction formelle avec ce que nous apprennent les trésors du III^e siècle sur la circulation de ce type de monnaies (cf. *IGCH* 1943, 1953, 1954, 2041-2043), comme si étaient tout à coup dénuées de fondement les observations minutieuses de R.F. SUTTON, *The Populonia Coinage and the Second Punic War*, dans *Contributi introduttivi*, p. 199ss. et particulièrement p. 209.

À tous égards, la découverte de Prestino est exceptionnelle : on attend donc d'être mieux informé des circonstances précises de l'apparition en fouilles de ce didrachme. Comment ne pas s'étonner, en effet, de la découverte dans un site au nord du Pô d'un didrachme de Populonia, dont on n'a par ailleurs retrouvé aucun exemplaire comparable dans une couche datable du Ve siècle sur les lieux mêmes de production, ou dans un trésor qui l'associerait à d'autres témoins numismatiques de ce siècle. L'adage *Testis unus, Testis nullus* paraît plus que jamais devoir être médité en pareil cas. Trop de questions surgissent, en effet, qui nous font craindre les fausses certitudes. Si l'on veut bien s'abstraire des conclusions proposées pour le moment et prendre en considération les «évidences» numismatiques, on se doit de constater d'abord que le didrachme de Populonia au type du Gorgoneion entre dans une série métrologique qui le relie avant tout à d'autres dénominations d'un poids proportionnel, marquées V et IIS (cf. P. PETRILLO SERAFIN, *Le serie monetarie di Populonia*, dans *Contributi introduttivi*, p. 106-108). Or, un système articulé selon des dénominations valant dix, cinq, deux et demi, est trop proche du système dénarial romain pour ne pas lui être historiquement lié, ce qui devient impossible si on l'en sépare par ces deux siècles d'histoire, particulièrement épais, que sont, pour l'Etrurie comme pour Rome, les Ve et IV^e siècles ! Si l'on cherche à intégrer le monnayage étrusque de Populonia par priorité aux usages du temps, on n'échappe pas à une problématique qui est essentiellement celle du III^e siècle. On opposera aussi la cohérence numismatique aux conclusions d'une analyse stylistique, comme celle conduite par I. KRAUSKOPF, *Zum Datum der Gorgoneia von Populonia*, dans *RSN*, 64, 1985, p. 61-71, ou *LIMC*, IV, s.v. *Gorgones* (in *Etruria*).

4 R. THOMSEN, *Early Roman Coinage*, II, Copenhague, 1961. Tout le volume est à méditer patiemment, tant les arguments qui font situer le denier au cours de la deuxième guerre punique y ont été méticuleusement soupesés ; ils restent valables, même s'il faut les ajuster à une chronologie plus fine. D'autre part, Morgantina, rappelons-le, n'a pas seulement fourni un *terminus ante quem* pour le denier ; les trouvailles qui y furent faites ont aussi démontré que l'étalon sextantaire et les toutes premières émissions de deniers, victoriats et monnaies d'or aux types Mars/aigle dataient bien du début de la deuxième guerre punique : lire à ce propos – parmi beaucoup d'autres – Th. BUTTREY, *Morgantina and the Denarius*, dans *NAC*, 8, 1979, p. 155 ss., repris dans *Morgantina Studies*, II, *The Coins*, Princeton, 1989. Nous nous sommes efforcés pour notre part, en partant de Morgantina, de situer en 215/214 l'apparition du denier, cf. *La datation du denier romain et les fouilles de Morgantina*, dans *RBN*, 117, 1971, p. 81-114, et *Histoire économique de la deuxième guerre punique*, Bruxelles, 1978, p. 299-301. Des découvertes récentes permettent même de dater avec une précision absolue les émissions produites chaque année à Morgantina, cf. *Monnayages puniques en Sicile au cours de la deuxième guerre punique*, dans *Phoenician and Punic Numismatics*, cité Survey, p. 181, n. 36. Voir encore, ici même (p. 109-116), l'étude de M. CACCAMO CALTABIANO, sur le trésor de monnaies d'or romaines découvert à Agrigente.

En prenant en compte, d'autre part, le contexte espagnol, on vérifie aisément que le quadrigat est toujours la monnaie en vigueur au début de la deuxième guerre punique. Les faits sont là, bien connus, même si certains les ignorent parfois.

l'ordonnance préconisée par Grueber⁵ aux classements de Sydenham ou de Crawford. Cet art de l'errance que cultive la numismatique romaine du III^e siècle explique qu'elle soit souvent absente des synthèses historiques. Un historien cherchera, en effet, à inscrire l'apparition de la monnaie, son développement et sa pénétration socio-économique dans des perspectives où la lecture des sources écrites au sens large – Polybe et Diodore étant plus importants qu'une référence isolée à Pline l'Ancien – constitue un préalable pour s'imprégner du climat d'une époque, et où l'analyse des faits et la compréhension des grands mouvements historiques doivent l'emporter sur la propension à construire des systèmes.

En guise de contribution aux travaux du colloque⁶ dont la préparation m'a ramené, dix ans après, à d'anciennes préoccupations, je m'accorderai l'audace de dénoncer certaines fausses certitudes de la numismatique républicaine que l'on devrait bannir de nos études. L'essentiel de mon propos ici concernera la représentation que l'on se fait du fonctionnement de la «monnaie» romaine, en nous intéressant de ce point de vue à l'atelier monétaire que l'on dit installé à Rome dès 289 et à la chronologie des émissions de bronze et d'argent de la période «romano-campanienne».

1. L'atelier monétaire romain et l'institution des *tresuiri monetales*

Le problème de l'atelier monétaire romain est directement lié à l'institution des *triumviri* ou *tresuiri monetales*, dont la création est évoquée dans un texte du *Digeste*. Dû à la plume de Pomponius, un juriste du II^e s. ap. J.-C., le passage énonce rapidement – et sans ordre ! – les plus importantes magistratures qui composaient le vigintisévirat, du moins celles d'entre elles qui survivaient encore sous l'Empire.

De ce texte, il est tout simplement impossible de tirer la moindre date pour l'institution des *tresuiri monetales*, comme M. Amandry⁷ l'a rappelé dans une étude oubliée de tous : les principaux collègues y sont cités, pêle-mêle redisons-le, entre deux créations de préteurs; ainsi, les fameux *tresuiri capitales*, les seuls dont on connaisse la date de création (289) grâce à Tite-Live, sont cités **après** la mention du préteur urbain créé en 242 ! Rien dans cette énumération ne nous autorise à inférer une date pour situer dans le temps l'apparition des magistrats monétaires. Il est donc particulièrement néfaste que du texte de Pomponius, l'on ait tiré la conviction qu'à partir de 289, Rome possède un atelier monétaire⁸. De là à en faire la date de la création de la monnaie à Rome, il n'y avait qu'un pas, vite franchi⁹. Les faits – les trésors entre autres mais aussi l'organisation

⁵ Comme A. FUSI ROSSETTI, *L'introduzione dei nomi gentilizi nella monetazione romana repubblicana*, dans *RIN*, 89, 1987, p. 29-42; ID., *Le zecche militari romane nel III sec. A.C.*, dans *RIN*, 91, 1989, p. 73-118; ID., *I simboli nella prima monetazione romana repubblicana*, dans *Ermanno A. Arslan studia dicata* (Glaux 7), Milan, 1991, p. 291-310.

⁶ Dans la suite, les références aux recherches récentes seront abrégées dans la mesure où elles ont été largement évoquées déjà dans le *Survey of Numismatic Research*, 1985-1990.

⁷ M. AMANDRY, *Le témoignage de Pomponius et la date de création des triumviri monetales*, dans *RBN*, 122, 1976, p. 59-63. Il n'est certes pas le premier à dénoncer l'incohérence du témoignage de Pomponius.

⁸ Si l'on comprend que Grueber ait sur ce point comme sur tant d'autres suivi Babelon, on est étonné que H. ZEHNACKER, *Moneta*, I (BEFAR, 222), Paris, 1973, p. 66-68 ait retenu – avec réserves toutefois – cette date de 289 dans un livre dont le propos est précisément l'étude de l'atelier monétaire romain. Par contre, K. PINK, *The Triumviri monetales and the Structure of the Coinage of the Roman Denarius* (Numismatic Studies, 7), New York, 1952, p. 49ss., avait rappelé le rôle prépondérant du questeur dans la gestion du trésor au cours du III^e s. et constaté qu'il n'y avait nulle trace de magistrats monétaires avant l'époque du denier. Il insistait aussi sur le fait que l'introduction de *tresuiri mensarii*, en 216, liée à une *penuria argenti* (T.-L., XXIII, 21), était de nature à faire reporter après cette date l'institution des *tresuiri monetales*.

⁹ R. THOMSEN, *ERC*, III, p. 172-178, et notamment la conclusion : *despite the wording in Pomponius, we must conclude that the lower magistracies, including the Triumviri Monetales, were instituted about 289 B.C.* Cette même conclusion sous-tend le système proposé par A. FUSI ROSSETTI, *art.cit.*, cf. *supra*, n. 5.

des émissions elles-mêmes¹⁰ – nous obligent à renoncer à faire de 289 une date-pivôt de la numismatique républicaine. Certains, néanmoins, n'en persistent pas moins à dater de cette année, malgré tout, l'institution des magistrats monétaires et à raisonner sur des modèles obsolètes. D'autres¹¹ substituent à cette erreur ancienne un nouvel *a priori* fatal, en imaginant que les magistrats monétaires auraient été créés en même temps que le denier ! Plus symptomatique encore est la constatation qui accompagne cette pétition de principe : on suppose que les triumvirs fonctionnent dès 212, mais on ne repère leur trace que trente ans plus tard¹². L'hypothèse d'une création qui serait contemporaine du denier est donc totalement gratuite. Tout ceci révèle à quel point font encore défaut une enquête objective sur les conditions mêmes de la production monétaire à Rome autant qu'un examen minutieux de la monnaie elle-même de nature à apporter des éclaircissements à ce niveau.

La seule rupture dans les habitudes monétaires qui soit de nature à trahir l'apparition de magistrats monétaires est le passage d'émissions multiples et variées – les fameuses émissions du système dénarial dit de la période « anonyme », comprise au sens large – à des séries qui portent, de manière régulière et homogène, des signatures clairement identifiables de magistrats. Parallèlement, le style des deniers s'unifie alors à un point tel que personne ne pourrait sérieusement contester que sur ces émissions la « Monnaie » de Rome exerce – enfin ! – un contrôle centralisé. C'est alors aussi – on le constate *de facto*, même si le détail reste à préciser – que cessent les émissions de victoriats. De surcroît, et ceci devrait être étudié avec le plus grand soin, la métrologie retrouve aussi une stabilité et un équilibre entre le bronze et l'argent tel que l'as est systématiquement plus lourd que le seuil oncial théorique¹³.

2. Chronologie et répartition des séries romano-campaniennes

Aborder l'étude de l'*aes grave* et des séries de didrachmes romano-campaniens dans la perspective d'un atelier romain qui en aurait contrôlé ou organisé la production conduit aussi la recherche dans des impasses d'où il lui est difficile ensuite d'émerger et aboutit à proposer des chronologies figées, comme celle du catalogue de M. Crawford, largement suivi par A. Burnett, et qui peut se résumer ainsi¹⁴ :

¹⁰ Ce n'est pas un hasard si la date de 269 est aujourd'hui considérée comme nettement plus essentielle que celle de 289, cf. e.g. A. BURNETT, *The Beginnings of Roman Coinage*, dans *AIIN*, 36, 1989, p. 34ss., à comparer avec *The First Roman Silver Coins*, dans *NAC*, 7, 1978, p. 122ss.; V. PICOZZI, *art. cit.*, *supra*, n. 3. Un certain consensus paraît se dégager pour dater de 269, à Rome, la production des didrachmes au type de la louve nourrissant les jumeaux, tandis qu'on fait à juste titre remonter aux années 320 la mise en circulation des premiers bronzes ROMANO, cf. A. BURNETT, *ibid.*, p. 37.

¹¹ Comme A. BURNETT, *Coinage in the Roman World*, Londres, 1987, p. 20, dans le prolongement de K. PINK, *loc. cit.* M. CRAWFORD, *RRC*, Cambridge, 1974, p. 601-602, et plus encore dans *Coinage and Money under the Roman Republic*, Londres, 1985, p. 55ss., reste évasif.

¹² A. BURNETT, *loc. cit.*

¹³ Cette stabilisation métrologique, pour importante qu'elle apparaisse, n'en est pas moins largement ignorée; c'est qu'elle n'est guère compréhensible, sans la retarification concomitante du denier à 16 asses. La datation de cette réforme vers 140 plutôt qu'en 210 n'est fondée que sur l'apparition sporadique et, à mon sens, non significative, de quelques signes XVI sur les deniers de quelques monétaires du milieu du II^e siècle. Cf. le résumé des positions dans H. ZEHNACKER, *Plinie l'Ancien*, cité *supra*, n. 3, p. 155-156.

¹⁴ De ce tableau, qui se veut démonstratif sans plus, nous excluons le bronze frappé. Il nous suffit ici de souligner les difficultés du classement proposé. Nous ignorons sciemment ici les modifications mineures récemment apportées à ce classement, que nous passons en revue dans une étude publiée dans *Cahiers du Centre G. Glotz*, 4, 1993, Paris-Sorbonne.

| RRC | Atelier | Séries d'Aes Grave | Poids | Date | RRC | Atelier Poids | Didrachmes |
|-------------------|---------|----------------------------------|---------|---------|------------|-----------------|---------------------------------|
| 14 | Rome | T.janiforme/T.Mercure | 320 g | 280-276 | 13 | Métap. 7,29g | T.Mars/T.cheval ROMANO + épi |
| 18 | Rome | T.Apollon/idem | 335 g | 275-270 | 15 | ? 7,21g | T.Apollon/cheval ROMANO/ étoile |
| 21 | Rome | T.Roma/idem | 267 g | 269-266 | 20 | Rome 7,05g | T.Hercule/louve ROMANO |
| 24 | Rome | Série à la roue | 270 g | 265-242 | 22 | Rome 6,75g | Roma/Victoire ROMA |
| 25 | Rome | T.janiforme/T.Mercure / faucille | 272 g | 241-235 | 25 | Rome 6,75g | T.Mars/T.cheval ROMA+ faucille |
| 26 | Rome | T.Apollon/idem | 284 g | 234-231 | 26 | Rome 6,75 g | T.Apollon/cheval ROMA |
| 27 | Rome | T.Roma/idem massue | 266 g | 230-226 | 27 | Rome 6,75 g | T.Mars/cheval ROMA+ massue |
| séries à la proue | | | 225-211 | | Quadrigrat | | |

Les émissions se succèdent régulièrement, à l'exception près, qui est toutefois notoire, du didrachme aux types Roma/Victoire¹⁵ et des séries à la roue supposées l'accompagner dont on fait, sans en donner les raisons, le monnayage de la première guerre punique. On a beau jeu de malmener un tel classement. On reste toutefois étonné que les discussions, animées entre autres par A.Burnett¹⁶, n'en remettent pas vraiment en cause l'articulation générale¹⁷, et notamment pas l'attribution de pratiquement toutes les séries à «l'» atelier de Rome. Un seul didrachme est concédé à Métaponte et la seule série à tête d'Apollon est attribuée à un atelier incertain. N'est-il pas néanmoins «évident» que pour rendre compte de la variété même des types et de la distribution en plusieurs séries lourdes et légères, l'hypothèse qui vient le plus spontanément à l'esprit, est une répartition en émissions parallèles, comme suit¹⁸ :

séries lourdes :

| | | |
|---------------|---|--|
| Bronze | Janus/Mercure 320g | Apollon/Apollon 335g |
| Didr. | T.Mars/T.cheval (RRC 13) ROMANO 7,29g | T.Apollon/cheval (RRC 15) ROMANO 7,21g |

15 | Là-dessus l'étude récente de H.B. MATTINGLY, *The Roma/Victory Romano Didrachms and the Start of Roman Coinage*, dans *Ermanno A. Arslan Studia Dicata*, p. 261-287, p. 279-280 pour les conclusions, ne modifie pas substantiellement les conclusions de l'«école anglaise».

16 | Cf. le résumé dans *The Beginnings of Roman Coinage*, p. 33ss.

17 | On n'en veut pour preuve que le tableau présenté par A. BURNETT, *Coinage in the Roman World*, Londres, 1987, p. 4, et les commentaires qui l'accompagnent : mise à part la première série, considérée à tous égards comme particulière, le reste du monnayage en argent aurait été produit régulièrement, chaque émission succédant à l'autre, à partir du seul atelier de Rome (p. 5), bien que destiné à circuler en Italie du Sud. Autre pétition de principe, difficilement acceptable : «during the ROMANO phase of the coinage, bronze and silver seem to have been produced independently». La structuration en séries parallèles démontre le contraire.

18 | Les conclusions de l'école «italienne», entendue au sens large, vont heureusement à l'encontre de telles propositions, mais l'impression que nous laissent pour l'instant les recherches contradictoires qui se développent dans la Péninsule est celle d'un bouillonnement, souvent dominé par des forces centrifuges. De certains excès dogmatiques je crains le pire.

18 | Selon un système dont, après Laura Breglia, H. MATTINGLY, *The Various Styles of the Roman Republican Coinage*, dans *NC*, s. 6, 9, 1949, p. 57, avait eu l'intuition, sans convaincre R. THOMSEN, *ERC*, III, p. 164ss.

séries plus légères :

| | | | | | |
|---------------|---|---------------------------------------|--|---------------------------------------|--|
| Bronze | Janus/Mercure 271g, faucille | Apollon/Apollon 283g, gland | T.Roma/Roue 270g | T.Roma/Roma 267g, sans symb. | T.Roma/Roma 270g, massue |
| Didr. | T.Mars/T.cheval (RRC 25) ROMA faucille | T.Apollon/cheval (RRC 26) ROMA | Hercule/Louve (RRC 20) ROMANO 7,05g | T.Roma/Victoire (RRC 22) ROMANO | T.Mars/Cheval (RRC 27) ROMA, massue |

La présence sur la série légère aux types Tête janiforme/Tête de Mercure d'un symbole (faucille) que l'on retrouve aussi sur les didrachmes légers Tête de Mars/Tête de cheval suffit à regrouper l'*aes grave* et le didrachme en une même «émission», comme le fait du reste M. Crawford (RRC 25), mais cela nous oblige aussi à rapprocher la série lourde (RRC 14) du didrachme lourd aux mêmes types, qui porte l'inscription ROMANO (RRC 13). De même convient-il de rapprocher les séries Apollon/Apollon, lourde et légère (RRC 18 et 26), des didrachmes dont le droit porte le même type – une tête laurée d'Apollon¹⁹ – et le revers un cheval au galop, qui se répartissent également en séries lourde et légère (RRC 15 ROMANO et 26 ROMA). Dans le même ordre d'idées, la présence d'un même symbole sur les didrachmes réduits aux types Tête de Mars/Cheval (RRC 27) suffit à les coordonner à la série d'*aes grave* aux types Tête de Roma/Tête de Roma : l'absence *de part et d'autre* de séries lourdes confirme même, s'il en est besoin, la pertinence du rapprochement, tout en démontrant la nécessité de conjuguer par ailleurs les séries lourdes d'*aes grave* et les didrachmes lourds quand ils existent. Et si l'articulation de la série d'*aes grave* à la roue avec le didrachme Roma/Victoire est plus aléatoire pour le moment, les autres rapprochements sont suffisamment obvis pour inviter à ordonner le classement en plusieurs séries *contemporaines*²⁰, plutôt que de les faire se succéder l'une à l'autre de cinq en cinq ans, d'où découlent les inextricables problèmes de chronologie que l'on rencontre dès que l'on aborde la numismatique romaine du III^e s. L'hypothèse de frappes parallèles décentralisées rend compte à elle seule de la multiplicité des séries d'*aes grave* antérieures au type à la proue. La mise en perspective tentée ici révèle déjà comment on est probablement passé de deux à au moins quatre séries entre l'époque des séries lourdes et celle des séries légères, comme il ressort aussi du tableau suivant dans lequel sont repris les poids des asses enregistrés par Haeblerlin :

| RRC | Janus/Mercure 14 25 | | Apollon/Apollon 18 26 | | Roma/Roma 21 27 | | Roma/Roue 24 | Janus/Proue T.à dr. T.à g. | | Luceria |
|----------|------------------------|----|--------------------------|---|--------------------|----|-----------------|-------------------------------|----|---------|
| 400-380g | 1 | | 1 | | | | | | | |
| 380-360 | 3 | | 11 | | | | | | | 1 |
| 360-340 | 5 | | 23 | | | | | | | 3 |
| 340-320 | 35 | | 38 | | | | | | | 2 |
| 320-300 | 28 | 1 | 19 | 2 | 1 | | 4 | 18 | 3 | 1 x |
| 300-280 | 10 | 3 | 1 | 3 | 3 | 6 | 8 | 173 | 9 | x |
| 280-260 | 5 | 11 | | | 8 | 11 | 18 | 671 | 31 | x |
| 260-240 | | 2 | | 2 | 5 | 5 | 13 | 276 | 17 | x |
| 240-220 | | 1 | | | 1 | | 1 | 27 | 13 | x |
| 220-200 | | | | | | | | 3 | 7 | |

L'association des deux séries lourdes d'*aes grave*, puis l'apparition simultanée des séries légères se vérifient bel et bien dans les trésors : les premières sont régulièrement associées dans les trésors anciens de *La Bruna* (RRCH 16), *Piazza Armerina* (RRCH 17), *Ardea* (RRCH 20), *Santa Marinella* (RRCH 21), *Commachio* (RRCH 25), *Tivoli* (RRCH 27). Que les séries légères ne fassent pas leur apparition progressivement, mais bien en même temps, est démontré de même par leur regroupement constant dans les trésors de *Pietrabbondante* (RRCH 31), *Amelia* (RRCH 38), *Ferento* (RRCH 39), *Monte*

¹⁹ Comme les séries de Luceria encore, ce qui n'est sans doute pas un hasard, cf. E.J. HAEBERLIN, *Aes Grave*, Francfort, 1910, p. 179ss.

²⁰ L'ordonnance reste à préciser dans le détail. Nous posons ici, pour l'heure, un *principe* de classement, sans ignorer que le rapprochement entre les séries d'*aes grave* aux types Roma/roue avec les didrachmes Roma/Victoire et Hercule/Louve pose quelques problèmes, cf. A. BURNETT, *The Beginnings of Roman Coinage*, p. 62-63.

Mario (RRCH 40), Pozzaglia (RRCH 43), Roma (RRCH 44), Casinum (RRCH 45)²¹ : comment l'auteur de *Roman Republican Coin Hoards* ne s'en est-il pas avisé ? Le constat qu'il nous faut ici poser ne démontre-t-il pas que beaucoup reste encore à découvrir²², même si pour y parvenir il convient de faire largement table rase, sans préjugé, en prenant soin d'une part d'éviter toute précipitation et, d'autre part, de ne pas se convaincre d'entrée de jeu que la solution consiste à revenir à une quelconque théorie «ancienne».

Une première période du monnayage romano-campanien paraît donc associer les séries lourdes Janus/Mercure et Apollon/Apollon, à une époque où fonctionnait déjà l'atelier provincial de Luceria²³. Le lien qu'il faut établir avec Luceria s'impose, non seulement parce que le type du droit de l'as y est semblable à celui de la série «romaine» Apollon/Apollon (RRC 18 et 26), mais aussi parce qu'au revers figure le cheval accompagné du symbole de l'astre qui orne aussi le revers du didrachme associé à la série romaine d'*aes grave*. Ce rapprochement fournit un très précieux point de repère chronologique puisque Luceria est devenue colonie romaine vers 314 (T.-L., IX, 26.3)²⁴. Et si l'on s'est avisé de remonter le didrachme Tête de Mars/Tête de cheval ROMANO (RRC 13) jusqu'au tournant des IV^e et III^e siècles²⁵, c'est-à-dire à l'époque de la deuxième guerre samnite, on n'en a pas encore tiré toutes les conséquences en ce qui concerne la datation même des séries d'*aes grave*. Si le plus ancien didrachme doit remonter avant 300, il est alors probable, en effet, que les séries lourdes Janus/Mercure et Apollon/Apollon débutent aussi au IV^e siècle, lors des guerres qui amènent les Romains à prendre pied en Campanie et en Apulie²⁶. Par la suite, au cours du III^e siècle, la multiplication des zones gagnées à la «romanisation» rendrait naturellement compte de la prolifération des séries d'*aes grave*²⁷ ?

²¹ Si la série légère Apollon/Apollon, très rare, est régulièrement absente de ces trésors, la raison en est peut-être qu'elle était alors largement suppléée par la série de Luceria (E.J. HAEBERLIN, *loc. cit.*).

²² Les considérations que nous développons ici ne visent pas l'exhaustivité, rappelons-le.

²³ Nous citons Luceria à titre d'exemple. Dans une reconstitution plus ambitieuse, on ne négligera pas, bien entendu !, d'autres séries, comme celles d'Hatria ou de Venusia, mais aussi les séries étrusques.

²⁴ Nous ne voulons pas entrer ici dans la discussion chronologique sur la fondation de Luceria, telle qu'elle résulte d'une confrontation du témoignage de Tite-Live avec ceux de Velleius Paterculus (I, 14.4) et de Diodore (XIX, 72), mais il importe de ne pas la négliger, dans la mesure où la date exacte de la fondation coloniale est capitale pour la chronologie du monnayage romain.

²⁵ Notamment en raison de la présence d'exemplaires de ce didrachme dans le trésor de Valesio qu'A. BURNETT, *The First Roman Silver Coins*, dans *NAC*, 7, 1978, p. 121-142, situe vers 300. La même date pour le trésor est confirmée dans A.E.M. JOHNSTON, *Report of a Discussion on South Italian Chronology, 350-280 B.C.*, dans *CH*, 7, 1985, p. 53. Soulignons qu'une date «vers 300», à l'intersection des 2^e et 3^e guerres samnites, n'est guère significative.

²⁶ Le parallélisme que les monnaies elles-mêmes nous obligent à établir entre le bronze et l'argent permet de repérer des séries parallèles. Mais la production matérielle des unes et des autres, bien qu'elle s'inscrive clairement dans des programmes coordonnés pour le bronze et l'argent, n'était pas nécessairement l'affaire des mêmes artisans ou des mêmes ateliers de fabrication. Il convient de distinguer l'autorité qui *contrôle* ou stimule la production – c'est-à-dire qui passe commande et fournit le métal – et le lieu ainsi que les conditions de fabrication. À quel point cette distinction s'impose, on ne peut que le constater à l'examen des *réalités* de la deuxième guerre punique : les trouvailles de cette époque nous obligent, en effet, à localiser la production des émissions de deniers, victoriats et bronzes aux quatre coins du champ de bataille, en Espagne, en Sicile, en Sardaigne, en Apulie... Tout le numéraire ainsi produit n'en porte pas moins le nom de la capitale italienne, ROMA ! Dans le cas des deniers à tout le moins, le Sénat restait certainement la seule instance officielle responsable en dernier recours de la production sur l'ensemble du champ de bataille. Pour s'en pénétrer, il suffit de lire Polybe et Tite-Live dont le témoignage devrait constituer la pierre d'angle de toute recherche, fût-elle exclusivement numismatique.

²⁷ Le type même des séries à la roue invite à les coordonner avec les productions d'Etrurie au même type.

On est par ailleurs frappé du fait que les types de la série à la proue, la seule à faire figurer une tête divine au droit de toutes les dénominations, reprennent pratiquement tous les types dominants de chacune des séries d'*aes grave* antérieures ou parallèles²⁸, du moins si l'on veut bien voir dans la tête qui orne le semis à la proue le même type que celui de l'as de la série Apollon/Apollon. Sa typologie particulière met aussi la série à la proue en relation avec toutes les autres séries d'*aes grave*, tout en lui réservant une place éminente. Même s'il ne fait pas de doute que les bronzes à la proue étaient destinés en priorité au *populus Romanus*, il serait étonnant – étant donné la multiplicité des ateliers qui ont produit les autres séries ROMANO ou ROMA – qu'ils n'aient été émis qu'à Rome. Que la numismatique au nom de Rome (ROMANO ou ROMA) soit, en effet, plus italique que «romaine» au sens strict reste en tout cas vrai jusqu'en pleine deuxième guerre punique, quand deniers et victoriats – tous deux émis au nom de Rome – constituaient encore deux monnayages parallèles, aux types bien distincts²⁹. Et nous sommes certains que des victoriats ont encore été émis dans plusieurs cités grecques d'Italie du Sud, Crotona, Luceria et d'autres, que désignent les lettres gravées au droit ou au revers des émissions³⁰. Cette explosion, alors, d'ateliers provinciaux est certainement moins révolutionnaire qu'il y paraîtrait à première vue. Elle doit s'inscrire en réalité dans un usage déjà séculaire.

La production et la chronologie des séries «romano-campaniennes» appellent encore d'autres remarques :

1. La conviction qu'il existe à Rome un puissant atelier dès le début du monnayage «romain» relève en fait d'un *a priori* beaucoup plus universel selon lequel les monnaies antiques, et donc aussi celles d'Italie au III^e siècle, n'ont pu être *fabriquées que dans des ateliers officiels*. Il faut bien mesurer à quel point l'hypothèse d'un grand atelier romain – administré ou non, dès 289 ou plus tard, par des *tresviri monetales* – est néfaste à une saine compréhension du fait monétaire italique en ceci, par exemple, qu'elle nous amène à négliger totalement un phénomène aussi instructif que l'authentique implantation campanienne du didrachme Roma/Victoire, dont l'émission est inséparable des monnayages de Naples, Cales et Suessa³¹.

L'hypothèse d'un grand atelier romain fait oublier que *rien* ne nous oblige à localiser en un seul lieu la production du bronze et de l'argent. Il ne manquait pas dans toute l'Italie de forges ou d'ateliers auxquels on pouvait faire appel quand il fallait fabriquer de la monnaie, les uns étant probablement spécialisés dans la coulée du bronze, les autres, plus orfèvres, étant versés dans l'art de graver les coins des monnaies d'argent et des *litrai* de bronze. Au nombre de ces derniers, ont certainement travaillé pour le compte des Romains *ceux* – le pluriel s'impose – qui ont collaboré à la production des séries napolitaines³², mais ils ne sont pas les seuls; pour les découvrir toutefois, il

²⁸ Un seul type, la tête d'Hercule du quadrans, est absent des séries antérieures, mais se retrouve sur le didrachme à la Tête d'Hercule/Louve.

²⁹ L'un étant destiné à la paie des citoyens romains, l'autre à celle des alliés, comme l'examen du contexte de la deuxième guerre punique suffit, à notre sens, à le démontrer clairement, cf. P. MARCHETTI, *Histoire économique*, p. 466-471. Cf. aussi R. THOMSEN, *ERC*, II, p. 320-391.

³⁰ Dont on n'a jamais mis en doute qu'elles renvoyaient bel et bien à des ateliers locaux, même si l'accord est loin d'être réalisé sur leur identification, cf. e.a. H.B. MATTINGLY, *The Victoriate*, dans *NC*, s. 6, 17, 1957, p. 111ss.; R. THOMSEN, *loc. cit.*; Ch. HERSH, dans *NC*, 1964, p. 347-348; M. CRAWFORD, *RRC*, I, *passim* (qui, dans la plupart des cas, préfère ne pas proposer d'identification, même lorsqu'elle paraît obvie, ainsi pour CROT, n°92); A. FUSI ROSSETTI, *Le zecche militari romane*, art. cit. (supra n. 5), p. 77.

³¹ Comme nous nous sommes efforcé de le rappeler dans *La Monetazione di Neapolis...*, dans *Atti del VII Convegno del Centro Internazionale di Studi Numismatici*, Naples, 1986, p. 449-451.

³² *Ibid.*, p. 446-449 et 455-463. Les remarques de R. CANTILENA, *ibid.*, p. 467, révèlent que n'a pas été perçu, dans la fébrilité du colloque, l'enjeu de ce que je me suis efforcé de démontrer. On relèvera aussi les réticences de A. JOHNSTON, *Metapontum*, III (*Numismatic Notes and Monographs*, 164), New York, 1990, p. 51-54, à propos de l'interprétation des signatures sur les

faudrait au préalable modifier nos habitudes de travail et apprendre à regarder les séries monétaires pour identifier non seulement les coins, mais aussi les mains des graveurs ou les caractéristiques d'ateliers. Si l'on pouvait, loin de tout parti pris, en comprendre l'intérêt, on réaliserait un progrès de même ampleur que celui engendré naguère par la charactéroscopie³³.

2. Rien n'indique que l'apparition du monnayage à la proue ait mis un terme définitif aux précédentes séries d'*aes grave*; il est, par contre, très probable que deux (quadrigat et Roma/Victoire), voire trois didrachmes différents (quadrigat, Roma/Victoire et Hercule/Louve) aient continué d'être émis simultanément jusqu'à leur remplacement par le denier et le victoriat. Ce maintien d'émissions parallèles en argent expliquerait pourquoi le denier n'a pas été la seule nouvelle monnaie à apparaître en 215/214.

3. Si l'on accepte les suggestions faites ici, on conviendra que la chronologie des émissions romaines du III^e siècle en sort profondément modifiée. Sur ce plan, quoiqu'il en soit, bien du travail nous attend, comme certains de nos collègues italiens s'en sont d'ores et déjà avisés, en offrant les nouvelles bases pour une datation du quadrigat et de l'étalon semilibril. Si la présence dans une tombe étrusque de Falerii Veteres³⁴ de *semunciae* d'étalon semilibril n'impose pas de remonter la date de l'étalon semilibril jusque dans le courant de la première guerre punique, par contre une datation haute du quadrigat résulte sans aucun doute de la découverte, dès 1891, dans les ruines mêmes de Sélinonte, d'un trésor³⁵ dont l'enfouissement – comme le suggère A. Fusi Rossetti³⁶ – devrait remonter au plus tard en 250, quand les Carthaginois vidèrent la ville de ses habitants. Face à une telle «révolution» en matière chronologique, on est amené à réévaluer de fond en comble la problématique historique, notamment en ce qui concerne le financement de la première guerre punique. À ce niveau les risques sont grands. M'autorisera-t-on, pour conclure, à mettre en garde contre certains excès d'interprétation ?

La première guerre punique n'est pas la seconde. Nous la connaissons d'abord beaucoup moins bien, du seul fait de la perte de la deuxième décade de Tite-Live, et aussi parce que notre vision est faussée par les chiffres excessifs souvent fournis par Polybe³⁷ dans sa volonté de démontrer la prodigieuse capacité romaine à mobiliser des troupes et à s'engager dans un conflit. N'oublions pas que cette guerre de conquête ne menaçait pas directement Rome, qui dès lors pouvait sans peine adapter ses efforts aux possibilités réelles, en n'envoyant en Sicile que les contingents «supportables» financièrement, quitte à ce qu'ils représentent souvent un maximum. Le système

monnaies de Métaponte. C'est une erreur de vouloir identifier un graveur *unique et personnalisé* dans tous les cas de signatures. Les signatures de graveurs, si elles paraissent la plupart du temps renvoyer aux artisans personnellement responsables de la gravure, peuvent aussi, dans le cas d'ateliers plus importants où travaillaient plusieurs graveurs, renvoyer au chef d'atelier sous la responsabilité duquel plusieurs ouvriers taillaient les coins. C'est cela qui dans certains cas entraîne la confusion dans nos esprits, mais la vérité n'est nullement modifiée du seul fait qu'elle est difficile à établir. L'examen du monnayage napolitain offre largement l'occasion de vérifier l'équation : signatures miniaturisées = graveurs *ou* chefs d'ateliers, tout en étant suffisamment complexe pour nous obliger à affiner l'approche. Les conclusions qu'on en tire sont solides, même si elles paraissent laborieuses à établir.

³³ Il est surprenant de constater que les épigraphistes sur ce terrain – cf. St.V. TRACY, *Attic Letter-Cutters of 229 to 86 B.C.*, Berkeley..., 1990 – sont en passe de devancer les numismates.

³⁴ Cf. F. CATALLI, *art.cit.*, *supra*, n. 2, p. 73-75. Je reste plus que réservé sur la chronologie très haute à laquelle paraît se ranger notre collègue.

³⁵ *RRC* 58 ou 61. Cf. R. THOMSEN, *ERC*, II, p. 259-260, n. 125.

³⁶ A. FUSI ROSSETTI, *Le zecche militari romane*, p. 92. Pour la destruction de Sélinonte, nous possédons le témoignage de Diodore, XXIV, 1.1. Il est exact que la ville ensuite disparaît largement de l'horizon historique.

³⁷ La comparaison avec ceux de Diodore est éclairante à ce propos.

censitaire romain paraît avoir été conçu pour une levée annuelle de quatre légions³⁸ et rien n'indique que les Romains³⁹ seraient alors *massivement et régulièrement* sortis de ce cadre. Du reste la première guerres puniques n'a peut-être duré aussi longtemps qu'en raison de l'adaptation des efforts romains aux moyens réellement disponibles. Ce serait une erreur de perspective que de se croire obligé d'équilibrer les «dévaluations» du monnayage romain, depuis le semilibral jusqu'au sextantaire, en les répartissant sur la première et la deuxième guerres puniques. En cette matière, historique s'il en est, il n'est pas besoin de raisonner par simple vraisemblance. La grande différence d'une guerre à l'autre, répétons-le, tient à ce que les Romains eurent la possibilité, entre 264 et 241, de s'adapter aux circonstances, tandis qu'à partir de 218 ils furent littéralement étouffés par la stratégie d'Hannibal qui les obligea à puiser dans toutes leurs réserves.

D'autre part, si l'on trouve en Sicile peu de numéraire romain qui soit lié au financement de la première guerre punique, la cause en est probablement que les troupes romaines n'étaient pas, du moins massivement, payées sur place, mais seulement en Italie, lors de la démobilisation, quitte à ce que l'État versât plusieurs annuités en une fois. En outre, pour leur ravitaillement, ils disposaient d'un allié particulièrement généreux en la personne d'Hiéron II. Le cas de la Sicile au cours de la première guerre punique serait assez bien comparable, toutes proportions gardées, à celui de la Grèce, où des armées romaines ont combattu au cours de la deuxième guerre punique, puis après 200, et à nouveau de 170 à 167, sans véritablement laisser sur place de témoins numismatiques directs !

³⁸ Comme il ressort de la lecture de Polybe, VI, 19 : si la levée de troupes annuelles fonctionnait encore au II^e siècle sur cette base, on peut en tirer sans risque la conclusion que l'enrôlement, dès l'instauration du système manipulaire, avait été prévu pour quatre légions. Si la grande peur de 225 et l'invasion de l'Italie par Hannibal ont bouleversé la norme, celle-ci devait toutefois toujours servir de référence à l'époque de la première guerre punique. Cf. P. MARCHETTI, *À propos du tributum romain*, dans *Armée et fiscalité dans le monde antique (Colloques nationaux du C.N.R.S., 936)*, Paris, 1977, p. 109-111, à comparer avec Cl. NICOLET, *Rome et la conquête du monde méditerranéen*, I (*Nouvelle Clio*, 8), Paris, 1977, not. p. 310ss.

³⁹ Surtout ne pas confondre les besoins des Romains – qui ne paient le *tributum* que pour subvenir à la solde de leurs concitoyens – et ceux des troupes alliées, *beaucoup* plus nombreuses – les alliés fournissent aussi les contingents maritimes – dont le *stipendium* était supporté par les cités.

Il tesoretto di oro «marziale» da Agrigento e il problema delle origini del sistema denariale

Maria CACCAMO CALTABIANO*

Nel 1987, in occasione di una campagna di scavi eseguiti dalla Soprintendenza di Agrigento nel quartiere ellenistico-romano dell'antica Acragas, è stato rinvenuto in prossimità dell'area del Bouleuterion, un tesoretto contenente cinquantadue aurei romani della serie testa di Marte/aquila sul fulmine¹.

Il tesoretto, che costituisce il primo ed unico rinvenimento nel suo genere², ha la medesima origine siciliana attestata dalla scoperta di un pezzo d'oro di XX assi col simbolo della spiga di grano nel corso degli scavi di Morgantina³. Oltre ad accrescere considerevolmente il totale degli esemplari noti⁴, esso fornisce varie indicazioni non soltanto sulle origini e la cronologia dell'oro «marziale», ma anche sulle fasi iniziali dell'intero sistema denariale, gettando nuova luce sul ruolo avuto dalla Sicilia nelle scelte di politica monetale operate da Roma nel corso della II guerra punica.

Gli aurei si distinguono rispettivamente in : 34 pezzi dal valore di 60 assi, due da 40 assi e 16 da 20, questi ultimi caratterizzati tutti sul R/ dalla presenza di una spiga di grano⁵. I nominali superiori anonimi sono stati finora attribuiti alla zecca di Roma⁶, quelli con spiga sono stati ritenuti emessi da zecca siciliana⁷. L'analisi iconografica e stilistica degli esemplari del tesoretto di Agrigento consente, in realtà, di giungere a conclusioni nuove e diverse. Numerose sono infatti le analogie di schema e di stile esistenti fra i tre nominali. È possibile coglierle non soltanto a livello generale nell'alto rilievo dell'incisione e nello stile maturo e raffinato dei tipi, ma anche in elementi più particolari quali la *chlamys* dal disegno appena accennato intorno al collo, l'anello nel quale si avvolge lateralmente la linea della visiera dell'elmo, la peculiare forma a ventaglio dell'attaccatura del cimiero, e, sul rovescio, la rappresentazione semplice ed essenziale delle aquile, caratterizzate tutte da un'ala destra resa nella zona superiore con più file di piccole perle e in basso con poche penne rade.

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¹ Del rinvenimento è stata data notizia da E. DE MIRO, in *Archeo*, 33, 1987, p. 6-7; vd. anche G. GORINI, *Agrigento. Ripostiglio di monete d'oro romane repubblicane*, in *RIN*, 90, 1988, p. 603.

² Esemplari isolati erano stati rinvenuti a Labico (Roma), Magione (Perugia), Melito Irpino (Avellino), Montone del Grano (Ancona), per i quali vd. M. CRAWFORD, *Coinage and Money under the Roman Republic* (= *CMRR*), London, 1985, p. 286 app. 13.

³ Cfr Th.V. BUTTREY, *The Morgantina Excavations and the Date of the Roman Denarius*, in *Atti Congresso Internazionale di Numismatica. Roma 1961*, Roma, 1965, p. 263; Th.V. BUTTREY, K.T. ERIM, Th.D. GROVES, R. ROSS HOLLOWAY, *Morgantina Studies II*, Princeton, 1989, p. 120 n. 522, p. 153 n. 522.

⁴ Si veda, a tal proposito, M. VON BAHRFELDT, *Die römische Goldmünzprägung während der Republik und unter Augustus*, Halle, 1923, p. 16-20.

⁵ Per l'edizione del tesoretto, con analisi stilistica ed iconografica e discussione delle relazioni tra tali serie e le altre emissioni romane in Sicilia, si veda M. CACCAMO CALTABIANO, *Le prime emissioni dell'oro «marziale» romano : il tesoretto di Agrigento 1987*, in *Quaderni dell'Istituto di Archeologia. Università di Messina*, 5, 1990, p. 1-23.

⁶ Cfr R. THOMSEN, *Early Roman Coinage*, Copenhagen, 1957-1961, II, p. 283; M. CRAWFORD, *RRC*, I, p. 154 n. 44.

⁷ La proposta di attribuire le emissioni romane caratterizzate dal simbolo della spiga a zecca siciliana era stata fatta da P. BONAZZI, *Le prime monete romane di bronzo coniate in Sicilia*, in *RIN*, 5, 1922, p. 5-27, in particolare p. 19-20 e 27, in base all'osservazione che numerosi esemplari enei recanti tale simbolo risultavano riconiati su esemplari siracusani di Gerone II, di Geronimo e della V Repubblica, e che la maggior parte di essi era stata rinvenuta in Sicilia.

All'interno degli esemplari da 60 assi distinguiamo, per praticità di analisi, due gruppi di emissioni, A e B, molto simili fra di loro, con numerose caratteristiche iconografiche in comune e poche differenze stilistiche, attribuibili alla diversa mano di due maestri incisori o di due gruppi di maestranze che operavano nel medesimo ambiente e si ispiravano alle medesime direttive.



Il Gruppo A (Fig. 1-10) presenta teste di Marte piuttosto piccole, con barbe poco voluminose peculiarmente appuntite, elmi dalla visiera poco pronunciata, calotta leggermente inclinata indietro e pennacchio contraddistinto sull'attacco dal disegno di un globetto. Il Gruppo B (Fig. 14-23) mostra teste più grandi, con barba voluminosa e arrotondata, elmo con visiera appuntita, attacco del cimiero interno rispetto all'area della calotta e con un'ornamentazione più elaborata. Sul R/, al Gruppo A corrispondono

rispettivamente aquile dal corpo snello e slanciato, con ala lunga e stretta ed un'impostazione del disegno decisamente verticale, ed al Gruppo B aquile dal corpo più massiccio, peculiarmente inclinate in avanti, con ala più larga ed alta. Le medesime caratteristiche di stile, facenti capo ai due gruppi, si colgono emblematicamente nei due esemplari da XXXX assi (Fig. 24-25), l'uno con aquila «sottile», l'altro con aquila «grassa». Per quanto riguarda i pezzi da XX assi con spiga, essi si confrontano pienamente con gli esemplari del Gruppo A, con i quali – in particolare – sono accomunati dalla peculiare presenza sul petto dell'aquila di globetti frammisti alle penne (vd. Fig. 6-10 e 12)⁸.



Il primo ed importante elemento che emerge dunque dall'analisi del tesoretto è che non solo le emissioni da XX assi con spiga sono state realizzate in zecca siciliana, ma viste le strettissime affinità stilistiche esistenti fra i tre nominali, in Sicilia sarebbero stati conati anche i pezzi da 60 e da 40 assi anonimi, finora ritenuti emessi esclusivamente

⁸ Per un'analisi più puntuale, in relazione soprattutto agli esemplari che presentano caratteristiche comuni ai due gruppi, vd. M. CACCAMO CALTABIANO, *op. cit.*

dalla zecca di Roma⁹. Quanto alla cronologia interna del tesoretto osserviamo come i 34 esemplari da 60 assi dipendano rispettivamente da 20 conii di D/ e da 17 di R/¹⁰, con vari legami al loro interno; gli esemplari da XX assi derivano, invece, proporzionalmente da un numero ben più limitato di conii, soltanto due diritti e tre rovesci¹¹, con ben quattordici esemplari aventi il medesimo diritto e solo due diversi rovesci. Diamo qui di seguito lo schema degli esemplari da 60 (n. 1-32), 40 (n. 35-36) e 20 assi (n. 37-52) inventariati ad Agrigento :

| | | | | | | | |
|-------|---------|-----------|------------|-------|---------|-----------|---------|
| 1. | 3,369 g | inv. 1212 | Fig. 1 | 19. | 3,355 g | inv. 1193 | Fig. 7 |
| 2. | 3,363 g | inv. 1213 | Fig. 2 | 20.] | 3,354 g | inv. 1211 | Fig. 8 |
| 3. | 3,272 g | inv. 1194 | Fig. 3 | 21.] | 3,361 g | inv. 1216 | Fig. 9 |
| [4.] | 3,320 g | inv. 1205 | Fig. 4 | 22. | 3,367 g | inv. 1192 | Fig. 10 |
| [5.] | 3,383 g | inv. 1204 | | [23.] | 3,359 g | inv. 1209 | Fig. 14 |
| [6.] | 3,312 g | inv. 1200 | | [24.] | 3,351 g | inv. 1210 | |
| [7.] | 3,355 g | inv. 1197 | | 25. | 3,355 g | inv. 1214 | Fig. 15 |
| [8.] | 3,363 g | inv. 1198 | | 26. | 3,395 g | inv. 1189 | Fig. 16 |
| [9.] | 3,373 g | inv. 1201 | | 27.] | 3,358 g | inv. 1183 | Fig. 17 |
| [10.] | 3,354 g | inv. 1199 | | 28.] | 3,375 g | inv. 1187 | Fig. 18 |
| [11.] | 3,400 g | inv. 1202 | | 29.] | 3,357 g | inv. 1188 | Fig. 19 |
| [12.] | 3,362 g | inv. 1203 | | [30.] | 3,359 g | inv. 1184 | |
| [13.] | 3,348 g | inv. 1185 | Fig. 5 | [31.] | 3,362 g | inv. 1215 | Fig. 20 |
| [14.] | 3,360 g | inv. 1191 | | 32. | 3,369 g | inv. 1195 | Fig. 21 |
| [15.] | 3,359 g | inv. 1196 | | 33. | 3,384 g | inv. 1186 | Fig. 22 |
| [16.] | 3,364 g | inv. 1206 | | 34. | 3,352 g | inv. 1190 | Fig. 23 |
| [17.] | 3,365 g | inv. 1208 | Fig. 6 | | | | |
| [18.] | 3,349 g | inv. 1207 | | | | | |
| 35. | 2,118 g | inv. 1182 | Fig. 24 | 36. | 2,240 g | inv. 1181 | Fig. 25 |
| [37.] | 1,100 g | inv. 1171 | Fig. 11 | | | | |
| [38.] | 1,102 g | inv. 1180 | | | | | |
| [39.] | 1,103 g | inv. 1179 | | | | | |
| [40.] | 1,105 g | inv. 1178 | | | | | |
| [41.] | 1,132 g | inv. 1177 | | | | | |
| [42.] | 1,170 g | inv. 1170 | | | | | |
| [43.] | 1,095 g | inv. 1168 | R. Fig. 12 | | | | |
| [44.] | 1,112 g | inv. 1173 | | | | | |
| [45.] | 1,049 g | inv. 1172 | | | | | |
| [46.] | 1,150 g | inv. 1169 | | | | | |
| [47.] | 1,086 g | inv. 1175 | | | | | |
| [48.] | 1,141 g | inv. 1174 | | | | | |
| [49.] | 1,080 g | inv. 1167 | | | | | |
| [50.] | 1,102 g | inv. 1176 | | | | | |
| [51.] | 0,953 g | inv. 1166 | Fig. 13 | | | | |
| [52.] | 1,199 g | inv. 1165 | | | | | |

La composizione del tesoretto indica chiaramente che i nominali anonimi sono i più antichi e che il suo seppellimento non dovette avvenire molto tempo dopo l'emissione dei pezzi da XX assi : se ci fosse stata una reale distanza cronologica fra il momento della loro coniazione e quello dell'occultamento la dispersione degli aurei sul mercato avrebbe comportato una *facies* del numerario maggiormente differenziata, con probabile impiego

⁹ Tale dato risulta, d'altro canto, coerente con quanto già osservato dagli studiosi, che, sulla base delle analogie stilistiche esistenti fra serie anonime ed emissioni col simbolo della spiga, hanno attribuito a zecca siciliana anche vittoriati, denarii, quinarii e sesterzi privi di simbolo, cfr M. CRAWFORD, *RRC*, p. 167 n. 67/1; p. 168 n. 68/1b. 2b. 3 ; p. 169 n. 70/1 e n. 71/1b.

¹⁰ Anche ammettendo che all'interno del tesoretto siano presenti conii ancora inediti, la percentuale da esso attestata, rispetto al numero di 27 conii di D. e di 26 di R. noti a M. CRAWFORD, *RRC*, p. 154 n. 44/2, è sicuramente elevata.

¹¹ Per tale emissione a M. CRAWFORD, *RRC*, p. 170 n. 72/2 sono noti in tutto quattro conii di D. ed altrettanti di R.

di un maggior numero di conii e la presenza di un quantitativo inferiore di esemplari derivanti dalla medesima coppia.

Circa la cronologia assoluta degli aurei in esame è a tutti noto come la comunanza dell'uso sull'oro 'marziale' dei medesimi simboli presenti sui denarii e sui bronzi sestantali, abbia fatto ritenere gli aurei contemporanei all'introduzione del denarius. Tale introduzione è stata datata dal Thomsen¹² e dal Crawford¹³ intorno al 211 a.C., dal Marchetti¹⁴, dal Manganaro¹⁵ e da altri¹⁶ intorno al 214 a.C. La *facies* del tesoretto di Agrigento e le circostanze storiche che è probabile ne abbiano determinato l'occultamento, sembrano sostenere la più alta di tali cronologie.



Si è già evidenziato come all'interno degli esemplari provenienti da Agrigento gli aurei da 60 e da 40 assi anonimi sembrano conati prima dei pezzi da 20 assi con spiga; un *terminus ante quem* per la coniazione di questi ultimi è indicato proprio dalle caratteristiche della spiga di grano. Il simbolo è presente su numerose emissioni realizzate da Roma in Sicilia nei tre metalli: all'interno del sistema denariale lo troviamo in un'emissione di vittoriati¹⁷, in due serie di denarii¹⁸, in due emissioni bronzee¹⁹ e nei

¹² R. THOMSEN, *ERC*, II, p. 283-285, 317-319.

¹³ M. CRAWFORD, *RRC*, p. 33-35; ID., *CMRR*, p. 55-56.

¹⁴ P. MARCHETTI, *La datation du denier romain et les fouilles de Morgantina*, in *RBN*, 117, 1971, p. 81-114; ID., *Histoire économique et monétaire de la deuxième guerre punique* (Académie Royale de Belgique, *Mémoires de la Classe des Beaux-Arts. Collection in-8°, 2e série*, XIV), Bruxelles, 1978, p. 299-301.

¹⁵ G. MANGANARO, *Un ripostiglio siciliano del 214-211 a.C. e la datazione del denarius*, in *JNG*, 31/32, 1981/82, p. 54.

¹⁶ Cfr A.S. WALKER, *Some Hoards from Sicily and a Carthaginian Issue of the Second Punic War*, in *Studies in Honor of Leo Mildenberg*, Wetteren, 1984, p. 281; E.A. ARSLAN, *Monetazione aurea ed argentea dei Brettii*, Milano, 1989, p. 42-47.

¹⁷ Cfr M. CRAWFORD, *RRC*, p. 170 n. 72/1.

¹⁸ Cfr M. CRAWFORD, *RRC*, p. 167-168, n. 68/1a. e 2a. (quinario); p. 170 n. 72/3. e n. 72/4. (quinario).

¹⁹ M. CRAWFORD, *RRC*, p. 168-169 n. 69 e p. 170-171, n. 72/ 5-15.

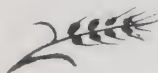
nostri aurei da 20 assi²⁰. Per quanto ridotte possano essere le dimensioni del simbolo è possibile distinguere una spiga priva di foglie, dal gambo corto e diritto e grossi semi, da una spiga con piccola foglia a s., gambo orizzontale e numerose ariste che occultano il contorno dei semi, ed infine una spiga con due foglioline, dal gambo lungo e ricurvo e dal disegno piuttosto rozzo e approssimativo. Il primo tipo di spiga, quella senza foglie, contraddistingue oltre l'oro ed i vittoriati anche i bronzi che vanno dalla fase trientale alla sestantale ridotta²¹, e che sono in parte cronologicamente precedenti alle emissioni in metallo pregiato. La spiga con una sola foglia compare sui denarii Sydenham C1 e C2²², quella con due foglie sui denarii Sydenham C3²³ e sui bronzi di fase sestantale ridotta e onciale, la maggior parte dei quali sono contraddistinti dalle lettere KA (= Catana?)²⁴.



AV da XX assi (Cr. n. 72/2); vittoriati (Cr. n. 72/1); AE dalla norma trientale alla sestantale ridotta (Cr. n. 40, 42, 72/5-15)



Denarii e quinarri (Cr. n.72/3-4 = Syd. C1, C2 + B4)



Denarii e quinarri (Cr. n.68/1a-2a = Syd. C3) ; AE (con KA o senza) dalla norma sestantale ridotta alla onciale (Cr. n. 69)

Che la differente resa stilistica della spiga non sia accidentale ma corrisponda non solo a differenti luoghi ma anche a differenti momenti di emissione, è dimostrato dal fatto che mentre i bronzi più pesanti²⁵ (dalla fase trientale alla sestantale ridotta) hanno la spiga priva di foglie, quelli più leggeri (fase sestantale ridotta e onciale), appartenenti per la maggior parte al gruppo con KA, presentano esclusivamente la spiga con due foglie²⁶. Ci pare dunque possibile affermare la contemporaneità degli aurei del tesoretto di Agrigento con i vittoriati ed i bronzi più pesanti e di bello stile, e la loro priorità rispetto ai denarii con spiga e ai bronzi più leggeri.

La cronologia degli aurei anonimi dovrebbe pertanto essere contemporanea agli inizi del denarius, 214 a.C., quella dei nominali con spiga seguire da lì a poco verso il 213 a.C. La cronologia di questi ultimi – come già evidenziato – dovrebbe essere molto prossima alla data d'interramento del tesoretto, visto il numero assai limitato di conii da cui derivano i sedici esemplari in esso presenti. Queste considerazioni ben si adattano ad una cronologia d'interramento contemporanea all'occupazione cartaginese di Agrigento, avvenuta agli inizi dell'estate del 213 a.C.²⁷. La città di Agragras, prima di essere occupata dai Punici, non sappiamo se costituisse una base di operazioni romane : è certo

20 Precedente all'introduzione del sistema denariale è anche una serie di quadrigati con spiga M. CRAWFORD, *RRC*, p. 152, n. 42/1.

21 Cfr M. CRAWFORD, *RRC*, p. 150 n. 40; p. 153, n. 42/2-5; p. 171 n. 72/5-15.

22 I denarii Sydenham C1 e i quinarri Sydenham C2 corrispondono nella classificazione di M. CRAWFORD, *RRC*, p. 170 al n. 72/ 3-4. Si è preferito adottare, con evidenti implicazioni sulla cronologia relativa degli esemplari, la classificazione che era stata proposta da E.A. SYDENHAM, *Problems of the Early Roman denarius*, in *Transactions of the International Numismatic Congress*, London, 1936, p. 266-267), in base all'evoluzione delle caratteristiche iconografiche dell'elmo, perchè secondo quanto già osservato anche da C.A. HERSCH, *Notes on the Chronology and Interpretation of the Roman Republican Coinage. Some Comments on Crawford's Roman Republican Coinage*, in *NC*, s. 7, 17, 1977, p. 19-24 essa ci sembra più corretta e comprovata anche dall'analisi interna delle emissioni con spiga.

Contrassegnata dal simbolo della spiga con una sola foglia è anche un'emissione di denarii del tipo Sydenham B4, non considerata dal Crawford, e illustrata nella pubblicazione di A. ALFÖLDI, *Zur römischen Münzprägung im zweiten punischen Kriege*, in *JNG*, 15, 1965, p. 42 e tav. 8, 5.

23 Tali emissioni corrispondono a M. CRAWFORD, *RRC*, n.68/1a-2a.

24 Cfr M. CRAWFORD, *RRC*, p. 168-169, n. 69. Esistono, tuttavia, anche bronzi onciali, a me noti da collezione privata, cfr M. CACCAMO CALTABIANO, *op. cit.*, tav. V n. 65, con spiga di grano con due foglioline, privi di lettere o monogramma KA.

25 Cfr M. CRAWFORD, *RRC*, p. 150 n. 40; p. 153, n. 42/2-5; p. 170-171, n. 72/5-15.

26 Vd., *supra*, n. 24.

27 Liv. XXIV, 35, 6-9.

che il console Marcello, per imperdirne l'occupazione, aveva lasciato solo l'altro console all'assedio di Siracusa. Non si spiegherebbe altrimenti la consistente presenza in essa di moneta d'oro romana, detenuta forse da un militare o da un agrigentino filoromano che, all'approssimarsi delle forze cartaginesi, ritenne opportuno occultare il suo gruzzolo. La cronologia interna dell'oro romano ed il fatto che il tesoretto non fu più ritrovato vengono così naturalmente a coincidere ed a spiegarsi con l'occupazione punica di Agrigento, mentre mal si adatterebbero ad una cronologia successiva al 210 a.C., in quanto posteriore alla rioccupazione romana della città e meno chiarificatrice delle cause che avrebbero reso necessario l'occultamento.

Dalla nostra veloce analisi ci pare dunque che risulti confermata una cronologia iniziale dell'oro «marziale», e quindi dell'intero sistema denariale, non più tardi del principio del 214 a.C. D'altro canto, l'origine siciliana almeno della maggior parte delle serie anonime dell'oro «marziale»²⁸, eguale a quella di numerose altre emissioni di denarii, vittoriati e bronzi²⁹, pone il problema del ruolo svolto dalla Sicilia nell'assunzione di questo particolare sistema. Se infatti – come sottolineato da A. Burnett³⁰ – l'esperienza monetale dell'Italia Meridionale ha avuto un'importanza rilevante nelle varie fasi di tutte le emissioni romano-campane, ci sembra che bisogna cominciare a riflettere sull'esperienza monetale siciliana, siracusana in particolare, per capire le modalità e le caratteristiche del sistema denariale. Accanto al rinvenimento di numerosi tesoretti – contenenti le emissioni iniziali del denarius – nell'Italia del Sud e nella Sicilia³¹, ed al carattere peculiarmente «meridionale» della maggior parte delle tipologie impiegate in quel sistema³², è assai significativo che i valori ponderali adottati da Roma per il denario

28 In base all'analisi di più di un centinaio di esemplari, facenti parte della Collezione dell'American Numismatic Society e del Medagliere del Museo di Berlino (a tal proposito cogliamo l'occasione per ringraziare della loro cortesia e disponibilità la dott.ssa C. Arnold Biocchi e il dott. F. Schultz) o pubblicati su Cataloghi di vendita, crediamo di poter affermare che non esistano all'interno delle serie anonime difformità iconografiche tali da far pensare ad emissioni separate di una zecca attiva in Roma e di un'altra operante in Sicilia. Ci proponiamo, comunque, di pubblicare i risultati delle nostre indagini appena ultimata la raccolta dei materiali.

29 Vedi, *supra*, n. 9.

30 A. BURNETT, *The Beginnings of Roman Coinage*, in *AIN*, 36, 1989, p. 33-64; del medesimo studioso si veda anche *The Iconography of Roman Coin Types in the Third Century BC*, in *NC*, 146, 1986, p. 67-75, di cui ci pare, tuttavia, piuttosto ingiustificata l'ipotizzata influenza della monetazione macedone su quella romana.

31 Per i rinvenimenti nell'area del Bruzzio vd. M. CRAWFORD, *CMRR*, p. 287-290; per la Sicilia, *ibidem*, p. 109-111, e 306 App. 36.

32 Il tipo dei Dioscuri a cavallo, presente sul R. dei denarii, si confronta con quello adottato dai Brettioi sul R. degli stateri d'AR, E.A. ARSLAN, *op. cit.*, p. 64-65. Il tipo brettio è coevo a quello dei bronzi siracusani con al D. la testa di Apollo/Dioscuri a cavallo (*SNG ANS* n. 1053-1056; R. CALCIATI, *Corpus Nummorum Siculorum*, II, Milano, 1986, p. 415-417 n. 205-206), ed entrambi sono precedenti rispetto ai denarii romani, i primi perchè ponderalmente corrispondenti ai quadrigati, i secondi perchè caratterizzati da lettere presenti sulle emissioni di Gerone II e Geronimo (cfr. a tal proposito, M. CACCAMO CALTABIANO, *op. cit.*, n. 80). I Dioscuri dei denarii romani, rispetto a quelli delle serie brettie e siracusane, sostituiscono all'atteggiamento delle mani destre alzate in segno di saluto, le lance impugnate nelle destre secondo lo schema proprio del «cavaliere», presente sulle serie bronzee battute a nome di Gerone II (R. CALCIATI, *CNS*, II, p. 359-365; 374-383), come si evince anche dal particolare delle clamidi svolazzanti. La vittoria coronante il trofeo militare dei vittoriati romani, pur trovando il confronto cronologicamente più prossimo nei sestanti enei dei Brettii con al D. testa di Marte di norma trientale ridotta (*SNG ANS* n. 28-43), ha il suo prototipo nel R. dei tetradrammi agatoclei con testa di Kora (*SNG ANS* n. 664-681). In relazione alla testa di Zeus dei vittoriati, analogie stilistiche col medesimo tipo presente sulle dracme d'AR di Acragas (*SNG ANS* n. 1135-1137), sono state già osservate da E.A. SYDENHAM, *The Victoriata*, in *NC*, s. 5, 12, 1932, p. 94-95, ribadite da M. CRAWFORD, *RRC*, p. 16, e sottolineate anche da A. BURNETT, *The Enna Hoard and the Silver Coinage of the Syracusan Democracy*, in *RSN*, 62, 1983, p. 6, che ritiene Acragas la possibile zecca dei vittoriati romani conati in Sicilia. Oltre alle analogie tipologiche e di stile, va sottolineato come i vittoriati romani condividano con gli argenti agrigentini anche i valori ponderali. Nelle emissioni dell'oro marziale è possibile riconoscere un'influenza tolemaica sia nel tipo dell'aquila sul fulmine, ispirato al R. dei pesanti bronzi egiziani, che nell'adozione del disegno della

ed il vittoriato siano gli stessi utilizzati in precedenza a Siracusa per le dracme di Filistide e per quelle battute a nome del figlio Gelone³³. A Siracusa le due dracme fanno capo rispettivamente al sistema ponderale euboico-attico e a quello tolemaico. In relazione a quest'ultimo sono stati adeguatamente chiariti e valorizzati i rapporti della Sicilia col mondo egiziano³⁴, non è stato invece ancora evidenziato come l'uso di una dracma di peso euboico attico costituisca la spia dell'importanza a Siracusa – oltre che del sistema tolemaico – anche del sistema ponderale adottato dagli altri grandi regni ellenistici dell'area del Mediterraneo, dal macedone al seleucidico³⁵.

Il dissolversi in Sicilia – alla morte di Gerone II – del forte regno siracusano, dovette porre ai governanti romani il problema di un'eredità politica ed economica che è senz'altro riduttivo leggere esclusivamente in direzione dei rapporti con Cartagine. L'analisi storica e numismatica deve sicuramente tener conto anche della posizione politica di carattere internazionale e del ruolo interstate che alla Sicilia erano stati conquistati da Agatocle³⁶ già alla fine del III sec. a.C.: non a caso egli fu il primo statista siciliano ad aver inaugurato nell'isola una doppia politica monetale, fondata sull'emissione di tetradrammi euboico-attici e di pegasi di peso ridotto³⁷, interpretabili questi ultimi come didrammi ridotti di peso tolemaico.

chlamsys intorno al collo di Marte, presente nel ritratto di Tolomeo IV (I.N. SVORONOS, *Ta nomismata tou kratous ton Ptolemaion*, III, Atene, 1904, n. 1139 tav. 37, 1; n. 1177-1179, 1185, 1187, 1189 tav. 43, 1-3, 10, 12, 15 ecc.) in emissioni coniate solo qualche anno prima di quelle romane. Per un'analisi di tali elementi iconografici vd. M. CACCAMO CALTABIANO, *op. cit.*, che ipotizza che l'influenza si sarebbe realizzata con la mediazione dei Greci di Sicilia e dell'Italia Meridionale.

³³ Per le dracme battute a nome di Filistide cfr M. CACCAMO CALTABIANO e V. TROMBA, *La monetazione della basilissa Filistide*, in *NAC*, 19, 1990, p. 161-183, in particolare p. 170-171, 173-174; *ibidem*, p. 175-181 l'analisi cronologica delle emissioni di Gelone II, per il quale vd. anche P.R. FRANKE, *Historisch-numismatische Probleme der Zeit Hierons II. von Syrakus*, in *JNG*, 9, 1958, p. 73-76.

³⁴ Oltre a G. DE SENSI SESTITO, *Ierone II, un monarca ellenistico in Sicilia*, Palermo, 1977, p. 156-157, 170, 172-173, vd. G. MANGANARO, *Movimento di uomini tra Egitto e Sicilia (III-I sec. a.C.)*, in *Egitto e storia antica dall'ellenismo all'età araba. Bilancio di un confronto. Atti del Colloquio Internazionale Bologna 31 Agosto- 2 Settembre 1987*, Bologna, 1987, p. 513-553.

³⁵ L'importanza di tale dracma a Siracusa emerge chiaramente nei quattordici mesi del regno di Geronimo che conia a proprio nome, quasi esclusivamente, la medesima dracma di Filistide di c. 4,20 g e un didrammo di 8,70 g (cfr R.ROSS HOLLOWAY, *The Thirteen-Months Coinage of Hieronymos of Syracuse (AMUGS, 3)*, Berlin, 1969, p. 22-23). Anche i governanti della V repubblica, pur non avendo coniato dracme pesanti, hanno emesso multipli di questa nella serie di didrammi testa di Kore/ Zeus stante con scettro di c. 8,50 g (A. BURNETT, *The Enna Hoard*, p. 23-24 : 10 litrai), e tetradrammi riconoscibili nei due nominali con la medesima testa di Atena al D. e al R. rispettivamente Artemide cacciatrice e fulmine. I valori ponderali massimi di tali esemplari, di 10,25 g e 6,82 g, interpretati dal Burnett (*The Enna Hoard*, p. 18-23) come pezzi da 12 e da 8 litre, ci danno un nominale da 20 litre eguale al tetradrammo di peso euboico-attico. La riaffermazione di tale sistema in Sicilia, dopo la fase timoleontea che aveva visto prevalere il sistema e lo statere corinzi, è senz'altro da attribuire all'influenza della monetazione di Alessandro Magno come dimostrano i numerosi rinvenimenti nella cuspide sud-orientale dell'isola, documentati dall'abbondante raccolta di dati di A. TUSA CUTRONI, *Monete macedoni ed ellenistiche nei ripostigli siciliani*, in *AIIN*, 37, 1990, p. 49-81.

³⁶ Cfr S. CONSOLO LANGHER, *La Sicilia dalla scomparsa di Timoleonte alla morte di Agatocle. La introduzione della «Basileia»*, in *La Sicilia antica*, a cura di E. GABBA e G. VALLET, Napoli, 1980, II, I, p. 311-323 e n. alle p. 338-342.

³⁷ Sulle emissioni agatoclee di pegasi si veda da ultima R. CANTILENA, *La riduzione ponderale a Siracusa*, in *Dialoghi di Archeologia*, S. III, 7, 1989, p. 9-20.

Un ripostiglio da Sulmona

Annalisa POLOSA*

Oggetto di questo studio è un ripostiglio di monete di bronzo repubblicane della serie della prora, rinvenuto nel 1886 a Sulmona, in Abruzzo, ed attualmente conservato presso il Medagliere del Museo Archeologico Nazionale di Chieti.

La bibliografia sull'argomento è piuttosto frammentaria; verranno qui riassunti i dati fondamentali.

La prima menzione del ripostiglio è dovuta ad Antonio De Nino nelle *Notizie degli Scavi di Antichità* del 1886; l'autore riferisce che in occasione di uno scavo in località S. Maria Roncisvalle, fuori Porta S. Matteo, si rinvenne un'olla piena di monete di bronzo. Il contenitore andò in frantumi ma le monete, «circa 500», vennero recuperate «quasi tutte», e il proprietario del terreno decise di donarle al Museo Civico di Sulmona¹.

In seguito venne stesa una lista dei monetieri rappresentati nel ripostiglio, in una lettera inviata nello stesso anno al Ministero della Pubblica Istruzione².

Il ripostiglio venne poi citato in un articolo nei *Berliner Münzblätter* del 1916, di Max von Bahrfeldt, che menziona una lista manoscritta delle monete stilata da Heinrich Willers nel 1904; le monete, a quanto constava al Bahrfeldt, erano conservate presso il museo Civico di Sulmona, «con l'esclusione di pochi pezzi dispersi»³.

Il ripostiglio è incluso da Michael Crawford, nel *Roman Republican Coin Hoards*, tra i rinvenimenti del periodo compreso fra 208 e 150 a.C.; il totale delle monete riportato è di 440, di cui 381 assi e 59 frazioni, «fino all'emissione di Caius Antestius»⁴.

Tutte le trattazioni sono riassunte nella *Forma Italiae* da Frank Van Wouterghem⁵. Riguardo alle monete si dice qui che esse vennero recuperate in numero di circa 500, «quasi tutti assi, ... pochi sestanti e 4 trienti»; al Museo Civico di Sulmona giunsero però solo 381 assi e 59 frazioni. Per quanto concerne la datazione del ripostiglio, la *Forma Italiae* dà una data del 210 a.C. per la moneta più antica con il monogramma MA di un Matienus e una del 90 a.C. per la più recente con il nome del magistrato Q. Titius, secondo Crawford, *Roman Republican Coinage*⁶.

La *Forma Italiae* riporta poi notizie interessanti riguardo al sito dove il ripostiglio fu rinvenuto. In primo luogo viene menzionato il ritrovamento di piccoli oggetti – ornamenti e statuette di bronzo – dallo stesso luogo da cui provengono le monete⁷; non è però accertato se questi oggetti siano effettivamente contestuali al ripostiglio. Inoltre, nella stessa area vennero individuate anche alcune tombe di età imperiale. Nella zona erano poi visibili fino al secolo scorso vestigia, ora scomparse, di edifici di età romana: secondo

* Roma.

1 DE NINO, *NotScavAnt*, 1886, p. 424.

2 Archivio Centrale dello Stato, Ministero della Pubblica Istruzione, Direzione Generale Antichità e Belle Arti, II vers., 1860-1895, b17, lettera del 20/09/1886.

3 M. VON BAHRFELDT, *Der Römische As Fund von Orbetello*, in *Berliner Münzblätter*, 179, NF 37, 1916, p. 605.

4 M.H. CRAWFORD, *Roman Republican Coin Hoards*, London, 1969.

5 F. VAN WOUTERGHEN, *Superaequum, Corfinium, Sulmo, Forma Italiae* IV, I, Firenze, 1984.

6 M.H. CRAWFORD, *Roman Republican Coinage*, Cambridge, 1974 (d'ora in poi abbreviato in *RRC*).

7 *Forma Italiae*, cit., p. 235.

gli eruditi locali si sarebbe trattato dei resti di un teatro, di un anfiteatro e di un edificio termale⁸.

Sicuramente dunque si tratta di un'area, extraurbana, interessata da una frequentazione piuttosto duratura, e la sua importanza può essere messa in relazione con due elementi: il primo è la presenza, nei pressi della chiesa di S. Maria Roncisvalle, di una fontana dalle acque considerate salutari; il secondo è la scelta di questo luogo per lo svolgimento, ancora in tempi recenti, di un mercato tradizionalmente collegato alle partenze annuali dei pastori transumanti. Il Van Wouterghem ipotizza la presenza a S. Maria Roncisvalle di un santuario extraurbano, e propone di considerare il rinvenimento non come un ripostiglio ma come una stipe votiva ad esso pertinente⁹.

Torniamo ora all'esame del tesoretto, che fu conservato presso il Museo Civico di Sulmona fino alla fine degli anni '50, quando venne creato il Medagliere del Museo Archeologico Nazionale di Chieti e la collezione di Sulmona vi fu trasferita, insieme ai reperti numismatici di altri musei abruzzesi. In quest'occasione il nucleo del ripostiglio venne confuso con il resto della collezione, composta da un piccolo gruppo di monete di zecche greche e indigene d'Italia centrale e meridionale ed un cospicuo quantitativo di emissioni di età imperiale e medievale.

In base alla successione dei numeri di inventario e all'esame dello stato di conservazione delle monete sono stati raccolti 350 assi sui 381 del totale riportato dal Crawford e 32 delle 59 frazioni, sicuramente pertinenti al ripostiglio.

Dopo aver effettuato la schedatura del materiale, tutto non molto ben conservato, si è proceduto all'analisi ponderale dei pezzi, con l'ausilio di alcuni metodi statistici elementari.

È stata effettuata una semplice analisi univariata, volta alla creazione di un diagramma della distribuzione di frequenze dei pesi.

A tale scopo, i pesi sono stati raggruppati in classi dell'ampiezza di 0.50 g, e per i cui limiti sono stati scelti numeri non interi. Si è poi calcolata la deviazione standard rispetto al peso teorico di ogni riduzione ponderale documentata¹⁰, e in base alle misure di dispersione, si sono attribuite le monete alle rispettive serie. Le frazioni sono rimaste escluse da questo settore della ricerca poiché esse erano in numero insufficiente per poter applicare analisi quantitative. I nominali minori appartengono alle riduzioni da semilibrale a semionciale; il quadrante e il sestante semilibrali riportano l'estremo cronologico superiore del ripostiglio al 217 a.C.¹¹

Per quanto riguarda gli assi, invece, l'analisi ponderale ha portato all'identificazione di monete appartenenti alle serie delle riduzioni sestantale, onciale e semionciale.

Gli assi della serie sestantale sono tutti alquanto sottopeso rispetto allo standard teorico di 54.50 g, mentre la distribuzione delle frequenze per le monete appartenenti alla riduzione semionciale ha un andamento più omogeneo.

La serie onciale invece mostra un andamento del grafico delle frequenze piuttosto anomalo rispetto ad una distribuzione normale. Infatti, osservando l'istogramma (Fig. 1), possiamo individuare un addensamento, come è lecito aspettarsi, intorno al peso teorico; la curva ha poi un andamento normale verso destra, a significare che l'aumento di peso delle monete è dovuto alle consuete imprecisioni di fabbricazione dei tondelli o alla presenza di patina e incrostazioni. Al contrario, verso sinistra, cioè nella

⁸ I. DI PIETRO, *Memorie storiche della città di Sulmona*, Napoli, 1804.

⁹ *Ibidem*, p. 236.

¹⁰ M.H. CRAWFORD, *RRC*, p. 596.

¹¹ Da M.H. CRAWFORD, *RRC* risulta che il peso medio degli esemplari della serie 41.8b, alla quale appartiene il quadrante in catalogo, fluttua dallo standard semilibrale a quello sestantale, il che giustifica il peso piuttosto basso del nostro esemplare.

parte di curva che riferisce della diminuzione di peso, la situazione presenta caratteristiche interessanti. Possiamo infatti osservare un ulteriore addensamento significativo intorno ai 22-23 g; oltre il quale la curva riprende poi un andamento normale. È già stato rimarcato dal Crawford che all'interno della fase onciale il peso dell'asse subisce successive riduzioni, che lo portano a pesare fino a $2/3$ del peso teorico; nel nostro caso non abbiamo l'addensamento su 19.83 g ($2/3$ dell'asse onciale), ma su un peso leggermente superiore. È ipotizzabile su questa base che l'unità, prima del suo assestamento definitivo sul peso di 18.83 g abbia conosciuto valori intermedi. Tanto più che lo stesso Crawford, nel suo esame degli standards ponderali in uso per il bronzo nel II sec. a.C.¹², rimarca non solo questo fenomeno, ma anche una serie di riduzioni successive del peso dell'asse anche nella fase sestantale, che lo porta dai 54.50 g originari a 40.50 e poi, nel 170 c. a.C., a 31.50 g.

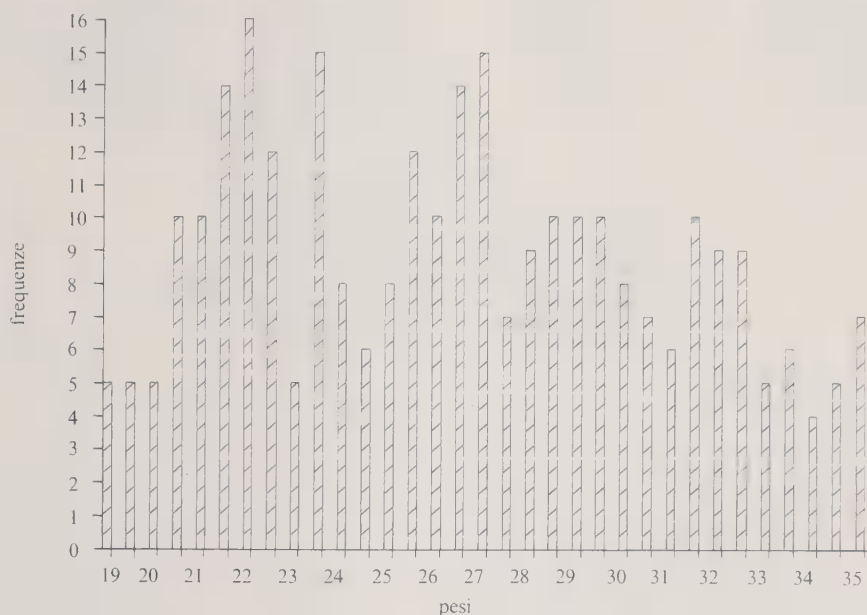


Fig. 1. Distribuzione dei pesi : assi onciali.

Una conferma di questa ipotesi può venire anche dal fatto che la maggior parte degli esemplari sottopeso porta il nome del magistrato, fenomeno che si verifica con maggiore regolarità in prosieguo di tempo, così da inquadrare il calo di peso in un periodo più tardo rispetto all'istituzione della riduzione onciale (Fig. 2 e 3). Questa ipotesi andrà tuttavia verificata con l'esame di altro materiale.

Un'altra caratteristica riscontrata all'esame del materiale è la presenza, su buona parte degli esemplari sottopeso, di un taglio netto che investe un arco di cerchio di circa 30° sulla circonferenza della moneta, che non sembra essere semplicemente il risultato del taglio dei codoli di fusione, e che non coinvolge l'integrità dei tipi e dei simboli. Ci si può chiedere se esso non possa essere stato compiuto sul tondello prima della coniazione, quasi come se ci fosse la necessità di continuare ad utilizzare le stesse forme per la fusione di tondelli per l'emissione di monete di peso inferiore¹³.

¹² M.H. CRAWFORD, *RRC*, p. 596.

¹³ I tondelli per le serie sestantale e onciale erano tondelli di forma piatta preparati per mezzo di stampi chiusi (A. FINETTI, *Numismatica e tecnologia*, Roma, 1987, p. 25-26, e H. PFEILER, *Die Münzprägung der Brettier*, in *JNG*, 14, 1964, p. 7 - 50 (p. 13).

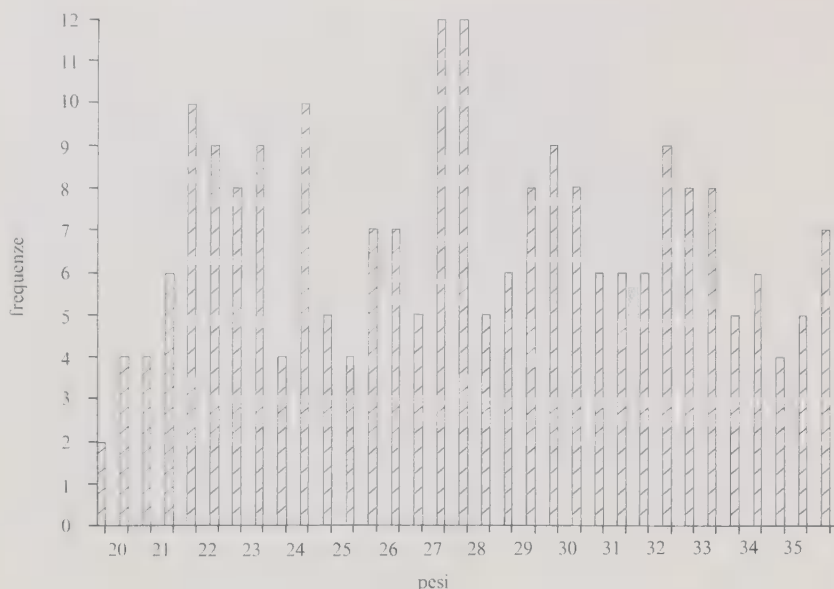


Fig. 2. Distribuzione dei pesi : assi onciali (monete prive di simbolo).

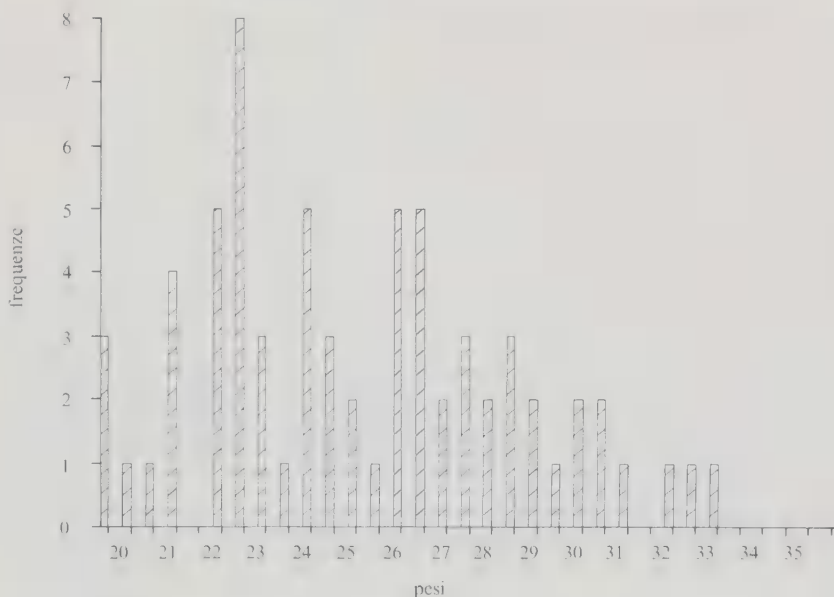
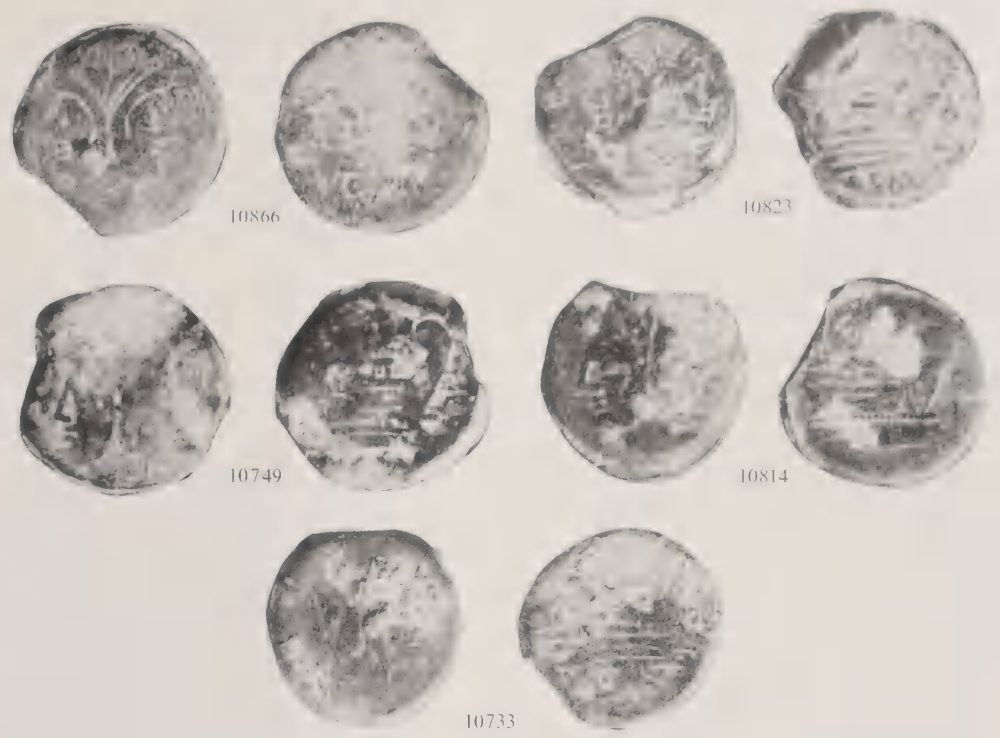


Fig. 3. Distribuzione dei pesi : assi onciali (monete con simbolo).

In conclusione, un breve riassunto dei punti fondamentali sul rinvenimento : la durata della tesaurizzazione va dal 217 (nominali della serie semilibrale) al 91 a.C. (riduzione semionciale); un arco di tempo di circa tre generazioni, abbastanza consueto per un ripostiglio di risparmio; meno probabile, considerata questa caratteristica e l'omogeneità del materiale, l'eventualità che si tratti di una stipe; si può pensare che la data di seppellimento sia da collocare negli anni immediatamente successivi all'introduzione dell'asse semionciale, quando gli eventi della guerra sociale coinvolsero in particolare la conca peligna : Corfinium, la capitale degli insorti, è a pochi chilometri da Sulmona; Sulmona stessa, quindi, era divenuta un luogo vulnerabile.



CATALOGO

Riduzione semilibrale (217 a.C.)

Quadrante. D/ Ercole; R/ prora (RRC 41.8b)

| N. | Inv. | g | mm | Asse | s.c. | leggenda | s.d.v. |
|----|-------|-------|----|------|------|----------|--------|
| 1 | 10625 | 28.86 | 31 | 180° | c.m. | ROMA | ooo |

Sestante. D/ Mercurio; R/ prora (RRC 38.5)

| N. | Inv. | g | mm | Asse | s.c. | leggenda | s.d.v. |
|----|-------|-------|----|------|------|----------|--------|
| 2 | 10764 | 27.00 | 30 | 315° | c.m. | | oo |

Riduzione sestantale (211 a.C.)
(pesi teorici adottati: 54.5 g; 40.5 g; 31.05 g)

Assi anonimi. D/ Giano; R/ prora (RRC 56.2)

| N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. | N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. |
|----|-------|-------|----|---------|------|------|--------|----|-------|-------|----|---------|------|------|--------|
| 3 | 10765 | 29.90 | 33 | 225° | c.m. | | | 18 | 10830 | 31.09 | 34 | 45° | c.c. | | |
| 4 | 10697 | 29.96 | 32 | 180° | c.m. | | | 19 | 10524 | 31.22 | 33 | 135° | c.m. | | |
| 5 | 10721 | 30.06 | 34 | 0° | c.m. | ROMA | | 20 | 10768 | 31.27 | 32 | 270° | c.m. | | I |
| 6 | 10865 | 30.09 | 31 | D/ ill. | c.c. | | | 21 | 10728 | 31.31 | 33 | 135° | c.m. | | I |
| 7 | 10774 | 30.21 | 32 | 180° | c.c. | | | 22 | 10607 | 31.44 | 33 | 135° | c.m. | | |
| 8 | 10767 | 30.28 | 33 | 180° | c.m. | ROMA | | 23 | 10557 | 31.51 | 34 | 90° | c.c. | ROMA | I |
| 9 | 10663 | 30.39 | 32 | 45° | c.m. | | | 24 | 10633 | 31.51 | 33 | R/ ill. | c.c. | | |
| 10 | 10813 | 30.41 | 32 | D/ ill. | c.c. | | | 25 | 10843 | 31.54 | 32 | 45° | c.m. | ROMA | |
| 11 | 10667 | 30.42 | 33 | R/ ill. | c.c. | | | 26 | 10748 | 31.65 | 31 | D/ ill. | c.p. | | |
| 12 | 10745 | 30.68 | 33 | D/ ill. | c.c. | | | 27 | 10562 | 31.68 | 35 | R/ ill. | c.c. | | |
| 13 | 10847 | 30.71 | 32 | R/ ill. | c.c. | | | 28 | 10842 | 31.75 | 34 | 135° | c.m. | ROMA | |
| 14 | 10649 | 30.79 | 32 | D/ ill. | c.c. | | | 29 | 10637 | 31.88 | 33 | R/ ill. | c.c. | | |
| 15 | 10852 | 30.95 | 34 | 0° | c.m. | | I | 30 | 10857 | 31.91 | 33 | 225° | c.c. | ROMA | I |
| 16 | 10798 | 30.99 | 34 | 90° | c.m. | ROMA | | 31 | 10672 | 31.97 | 32 | D/ ill. | c.c. | | |
| 17 | 10528 | 31.05 | 32 | D/ ill. | c.c. | ROMA | I | 32 | 10817 | 32.09 | 33 | 315° | c.m. | | |

| N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. | N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. |
|----|-------|-------|----|---------|------|------|--------|----|-------|-------|----|---------|------|------|--------|
| 33 | 10626 | 32.10 | 32 | 135° | c.m. | ROMA | | 66 | 10804 | 34.84 | 35 | D/ ill. | c.c. | | |
| 34 | 10656 | 32.16 | 32 | 225° | c.c. | | | 67 | 10563 | 34.87 | 36 | 270° | c.c. | ROMA | |
| 35 | 10632 | 32.17 | 32 | 0° | c.m. | | | 68 | 10704 | 34.88 | 33 | D/ ill. | c.p. | | |
| 36 | 10710 | 32.23 | 36 | R/ ill. | c.c. | | | 69 | 10568 | 34.91 | 35 | 180° | c.m. | | I |
| 37 | 10824 | 32.29 | 35 | 0° | c.c. | | | 70 | 10751 | 35.04 | 32 | 180° | c.m. | | |
| 38 | 10807 | 32.34 | 33 | D/ ill. | c.c. | | | 71 | 10595 | 35.13 | 34 | 90° | c.c. | | |
| 39 | 10709 | 32.50 | 33 | 180° | c.m. | ROMA | I | 72 | 10569 | 35.64 | 32 | 45° | c.m. | | |
| 40 | 10628 | 32.58 | 32 | 225° | c.c. | ROMA | | 73 | 10638 | 35.64 | 35 | D/ ill. | c.c. | | |
| 41 | 10644 | 32.68 | 32 | R/ ill. | c.p. | | | 74 | 10796 | 35.66 | 33 | 0° | c.m. | | I |
| 42 | 10722 | 32.71 | 34 | 180° | c.m. | ROMA | | 75 | 10731 | 35.87 | 32 | 225° | c.m. | | |
| 43 | 10833 | 32.71 | 32 | R/ ill. | c.c. | | | 76 | 10666 | 36.01 | 35 | 0° | c.m. | | |
| 44 | 10827 | 32.74 | 32 | D/ ill. | c.c. | | I | 77 | 10848 | 36.06 | 34 | 45° | c.m. | ROMA | |
| 45 | 10555 | 32.81 | 34 | 270° | c.m. | ROMA | | 78 | 10627 | 36.24 | 32 | R/ ill. | c.c. | | |
| 46 | 10825 | 32.89 | 34 | 315° | c.c. | | | 79 | 10589 | 36.35 | 32 | D/ ill. | c.c. | | |
| 47 | 10863 | 32.91 | 33 | R/ ill. | c.p. | | | 80 | 10609 | 36.43 | 36 | 270° | c.m. | | |
| 48 | 10810 | 32.94 | 32 | 225° | c.m. | | | 81 | 10802 | 36.54 | 32 | 0° | c.m. | ROMA | |
| 49 | 10707 | 33.08 | 32 | 0° | c.m. | ROMA | | 82 | 10652 | 36.72 | 35 | R/ ill. | c.c. | | |
| 50 | 10676 | 33.37 | 34 | D/ ill. | c.c. | | | 83 | 10624 | 36.78 | 35 | 0° | c.m. | | |
| 51 | 10688 | 33.39 | 34 | 180° | c.m. | | | 84 | 10561 | 37.08 | 32 | 180° | c.c. | | |
| 52 | 10630 | 33.41 | 32 | 135° | c.m. | | I | 85 | 10526 | 37.32 | 35 | 215° | c.m. | ROMA | |
| 53 | 10660 | 33.45 | 33 | R/ ill. | c.c. | | | 86 | 10787 | 37.48 | 33 | D/ ill. | c.c. | | I |
| 54 | 10635 | 33.49 | 32 | 0° | c.c. | ROMA | | 87 | 10612 | 38.29 | 33 | 270° | c.p. | | |
| 55 | 10640 | 33.51 | 32 | 0° | c.m. | | | 88 | 10523 | 38.49 | 33 | 135° | c.m. | ROMA | |
| 56 | 10580 | 34.02 | 32 | 135° | c.c. | | | 89 | 10556 | 39.43 | 34 | D/ ill. | c.c. | ROMA | I |
| 57 | 10683 | 34.15 | 32 | 90° | c.m. | ROMA | | 90 | 10781 | 38.89 | 32 | 180° | c.c. | | I |
| 58 | 10793 | 34.16 | 34 | 270° | c.m. | ROMA | | 91 | 10740 | 40.11 | 34 | 270° | c.m. | | |
| 59 | 10859 | 34.17 | 37 | 315° | c.m. | ROMA | | 92 | 10779 | 40.69 | 35 | 180° | c.m. | ROMA | |
| 60 | 10560 | 34.29 | 34 | 180° | c.m. | | | 93 | 10849 | 40.83 | 33 | R/ ill. | c.c. | | |
| 61 | 10654 | 34.30 | 34 | R/ ill. | | | | 94 | 10553 | 41.93 | 35 | 315° | c.c. | | |
| 62 | 10570 | 34.27 | 32 | 135° | c.m. | | I | 95 | 10559 | 42.42 | 32 | 45° | c.c. | ROMA | |
| 63 | 10747 | 34.27 | 33 | R/ ill. | c.c. | | | 96 | 10554 | 42.61 | 34 | 135° | c.p. | | |
| 64 | 10746 | 34.54 | 33 | R/ ill. | c.c. | | | 97 | 10567 | 44.40 | 32 | 90° | c.c. | | I |
| 65 | 10841 | 34.82 | 34 | 225° | c.m. | ROMA | | 98 | 10577 | 44.47 | 34 | 45° | c.m. | ROMA | |

Semissi. D/ Giove; R/ prora (RRC 56.3)

| N. | Inv. | g | mm | Asse | s.c. | legenda | s.d.v. |
|-----|-------|-------|----|------|------|---------|--------|
| 99 | 10552 | 22.84 | 28 | 225° | c.m. | ROMA | |
| 100 | 10581 | 30.58 | 30 | 0° | c.c. | ROMA | |
| 101 | 10623 | 24.96 | 30 | 30° | c.m. | | |
| 102 | 10803 | 21.87 | 29 | 270° | c.m. | | S |

Triente. D/ Minerva; R/ prora (RRC 56.4)

| N. | Inv. | g | mm | Asse | s.c. | legenda | s.d.v. |
|-----|-------|-------|----|------|------|---------|--------|
| 103 | 10861 | 17.12 | 33 | 315° | c.m. | | oooo |

Sestanti. D/ Mercurio; R/ prora (RRC 56.6)

| N. | Inv. | g | mm | Asse | s.c. | legenda | s.d.v. |
|-----|-------|------|----|------|------|---------|--------|
| 104 | 10244 | 6.85 | 18 | 270° | c.c. | | |
| 105 | 10429 | 8.88 | 20 | 0° | c.c. | | |

Oncia. D/ Bellona; R/ prora (RRC 56.7)

| N. | Inv. | g | mm | Asse | s.c. | legenda | s.d.v. |
|-----|-------|------|----|---------|------|---------|--------|
| 106 | 10283 | 5.02 | 18 | R/ ill. | c.c. | | |

Riduzione onciale (116-115 a.C.)
(pesi teorici adottati: 27.25 g; 22.5-23.5 g; 18.83 g)

Assi D/ Giano; R/ prora (RRC 197.198B.1b)

| N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. | N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. |
|-----|-------|-------|----|------|------|------|--------|-----|-------|-------|----|------|------|------|--------|
| 107 | 10769 | 16.70 | 31 | 180° | c.m. | | | 110 | 10835 | 17.52 | 31 | 90° | c.m. | | I |
| 108 | 10618 | 16.38 | 31 | 315° | c.c. | | | 111 | 10726 | 17.70 | 29 | 180° | c.m. | | |
| 109 | 10755 | 17.20 | 31 | 315° | c.m. | | | 112 | 10698 | 18.14 | 31 | 45° | c.m. | ROMA | |

| N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. | N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. |
|-----|-------|-------|----|---------|------|------|--------|-----|-------|-------|----|---------|------|---------|--------|
| 113 | 10829 | 18.25 | 34 | R/ ill. | c.c. | | | 182 | 10694 | 23.79 | 31 | 225° | c.m. | | |
| 114 | 10785 | 18.98 | 32 | R/ ill. | c.c. | | | 183 | 10815 | 23.86 | 32 | 45° | c.m. | ROMA | I |
| 115 | 10744 | 19.22 | 30 | 180° | c.c. | | | 184 | 10642 | 24.04 | 30 | 45° | c.m. | | |
| 116 | 10662 | 19.58 | 31 | 270° | c.c. | | | 185 | 10855 | 24.21 | 33 | 315° | c.m. | | I |
| 117 | 10651 | 19.60 | 31 | 90° | c.p. | | | 186 | 10818 | 24.24 | 29 | R/ ill. | c.c. | | |
| 118 | 10749 | 19.71 | 31 | 45° | c.m. | | | 187 | 10271 | 24.32 | 30 | 180° | c.c. | | |
| 119 | 10712 | 19.72 | 30 | 0° | c.c. | | I | 188 | 10665 | 24.38 | 31 | 180° | c.m. | | |
| 120 | 10811 | 19.90 | 30 | 270° | c.m. | | I | 189 | 10862 | 24.43 | 31 | R/ ill. | c.c. | | |
| 121 | 10869 | 19.95 | 31 | 180° | c.m. | ROMA | | 190 | 10760 | 24.66 | 32 | R/ ill. | c.c. | | |
| 122 | 10614 | 20.01 | 31 | 135° | c.c. | | | 191 | 10670 | 24.75 | 31 | R/ ill. | c.p. | | |
| 123 | 10668 | 20.08 | 30 | 180° | c.c. | | | 192 | 10693 | 24.76 | 32 | 315° | c.m. | | |
| 124 | 10761 | 20.54 | 32 | 45° | c.m. | ROMA | I | 193 | 10621 | 24.77 | 32 | 90° | c.c. | ROMA | |
| 125 | 10820 | 20.60 | 30 | 270° | c.m. | | | 194 | 10795 | 24.91 | 30 | 180° | c.m. | | I |
| 126 | 10716 | 20.64 | 31 | 90° | c.c. | | | 195 | 10823 | 24.97 | 31 | 135° | c.m. | ROMA | |
| 127 | 10801 | 20.65 | 30 | 270° | c.m. | ROMA | I | 196 | 10812 | 24.99 | 32 | 225° | c.c. | | |
| 128 | 10608 | 20.66 | 29 | D/ ill. | c.c. | | | 197 | 10706 | 25.03 | 32 | 90° | c.c. | ROMA | I |
| 129 | 10277 | 20.68 | 30 | 180° | c.c. | | | 198 | 10846 | 25.11 | 31 | 270° | c.m. | ROMA | |
| 130 | 10773 | 20.71 | 32 | 90° | c.c. | | | 199 | 10717 | 25.34 | 31 | 225° | c.c. | | |
| 131 | 10730 | 20.78 | 29 | R/ ill. | c.c. | | | 200 | 10673 | 25.36 | 31 | 315° | c.m. | | |
| 132 | 10839 | 20.83 | 31 | R/ ill. | c.c. | | | 201 | 10636 | 25.52 | 30 | 0° | c.c. | | |
| 133 | 10674 | 20.96 | 33 | 0° | c.c. | | | 202 | 10784 | 25.56 | 33 | 180° | c.c. | | |
| 134 | 10604 | 20.98 | 34 | 180° | c.m. | | | 203 | 10838 | 25.57 | 33 | D/ ill. | c.c. | ROMA | I |
| 135 | 10664 | 21.01 | 30 | 180° | c.m. | ROMA | | 204 | 10675 | 25.63 | 31 | 0° | c.c. | | |
| 136 | 10752 | 21.07 | 32 | 90° | c.m. | ROMA | I | 205 | 10790 | 25.63 | 31 | 270° | c.m. | | |
| 137 | 10866 | 21.12 | 31 | R/ ill. | c.c. | | | 206 | 10844 | 25.84 | 33 | 45° | c.c. | | |
| 138 | 10677 | 21.14 | 31 | R/ ill. | c.c. | | | 207 | 10757 | 25.88 | 31 | 90° | c.c. | | |
| 139 | 10794 | 21.15 | 31 | 270° | c.m. | ROMA | | 208 | 10739 | 25.95 | 36 | 135° | c.c. | | |
| 140 | 10678 | 21.17 | 32 | 45° | c.c. | | | 209 | 10703 | 26.04 | 32 | 135° | c.m. | ROMA | |
| 141 | 10758 | 21.27 | 32 | 225° | c.c. | | | 210 | 10274 | 26.18 | 30 | 0° | c.c. | | |
| 142 | 10276 | 21.32 | 30 | 90° | c.c. | | | 211 | 10724 | 26.23 | 32 | 45° | c.m. | | I |
| 143 | 10599 | 21.32 | 29 | D/ ill. | c.c. | | | 212 | 10782 | 26.29 | 33 | 315° | c.m. | ROMA | I |
| 144 | 10727 | 21.33 | 32 | 225° | c.m. | | I | 213 | 10837 | 26.30 | 31 | R/ ill. | c.c. | | |
| 145 | 10643 | 21.39 | 30 | R/ ill. | c.c. | | | 214 | 10531 | 26.45 | 31 | 135° | c.m. | | I |
| 146 | 10702 | 21.42 | 31 | 180° | c.m. | ROMA | I | 215 | 10743 | 26.46 | 34 | 0° | c.c. | | |
| 147 | 10832 | 21.63 | 32 | D/ ill. | c.c. | | | 216 | 10714 | 26.47 | 32 | 45° | c.m. | | |
| 148 | 10658 | 21.66 | 30 | 180° | c.m. | | | 217 | 10713 | 26.55 | 33 | 0° | c.m. | | |
| 149 | 10759 | 21.69 | 31 | R/ ill. | c.c. | | | 218 | 10631 | 26.58 | 29 | 270° | c.m. | | |
| 150 | 10819 | 21.78 | 31 | 225° | c.m. | ROMA | I | 219 | 10619 | 26.67 | 32 | 45° | c.m. | ROMA al | |
| 151 | 10723 | 21.79 | 32 | D/ ill. | c.c. | | | | D/ | | | | | | |
| 152 | 10766 | 21.89 | 32 | 90° | c.m. | | I | 220 | 10701 | 26.71 | 30 | 270° | c.c. | | |
| 153 | 10750 | 22.01 | 30 | 135° | c.c. | | | 221 | 10738 | 26.73 | 34 | D/ ill. | c.c. | | |
| 154 | 10696 | 22.10 | 31 | 90° | c.m. | | | 222 | 10786 | 26.74 | 32 | 0° | c.c. | | |
| 155 | 10805 | 22.11 | 30 | R/ ill. | c.c. | | | 223 | 10729 | 26.75 | 33 | 90° | c.m. | | |
| 156 | 10867 | 22.15 | 31 | 270° | c.m. | ROMA | | 224 | 10641 | 26.77 | 33 | 180° | c.c. | | |
| 157 | 10806 | 22.18 | 30 | 90° | c.m. | ROMA | | 225 | 10840 | 26.85 | 35 | R/ ill. | c.c. | | |
| 158 | 10753 | 22.20 | 30 | 0° | c.m. | ROMA | | 226 | 10719 | 26.87 | 31 | 315° | c.c. | | |
| 159 | 10808 | 22.26 | 32 | 45° | c.m. | | | 227 | 10603 | 27.00 | 32 | 90° | c.c. | | |
| 160 | 10834 | 22.26 | 34 | 135° | c.c. | | | 228 | 10778 | 27.01 | 33 | 315° | c.m. | | I |
| 161 | 10775 | 22.30 | 33 | 180° | c.c. | | | 229 | 10543 | 27.10 | 30 | 315° | c.c. | ROMA | |
| 162 | 10777 | 22.36 | 31 | 315° | c.m. | ROMA | | 230 | 10657 | 27.11 | 32 | 90° | c.m. | | |
| 163 | 10754 | 22.44 | 32 | 0° | c.m. | ROMA | I | 231 | 10629 | 27.12 | 33 | 0° | c.m. | ROMA | |
| 164 | 10851 | 22.52 | 31 | 45° | c.c. | | | 232 | 10858 | 27.12 | 33 | 45° | c.m. | | |
| 165 | 10831 | 22.56 | 32 | 45° | c.m. | | | 233 | 10791 | 27.17 | 32 | D/ ill. | c.c. | | I |
| 166 | 10799 | 22.63 | 32 | 135° | c.m. | | I | 234 | 10527 | 27.18 | 34 | 45° | c.c. | ROMA | |
| 167 | 10868 | 22.69 | 32 | 135° | c.c. | ROMA | | 235 | 10680 | 27.19 | 32 | 270° | c.m. | | |
| 168 | 10639 | 22.90 | 31 | 90° | c.c. | ROMA | | 236 | 10736 | 27.30 | 34 | D/ ill. | c.c. | | |
| 169 | 10695 | 22.98 | 31 | 45° | c.m. | | | 237 | 10661 | 27.33 | 34 | D/ ill. | c.c. | ROMA | |
| 170 | 10788 | 23.03 | 30 | D/ ill. | c.c. | | I | 238 | 10735 | 27.54 | 34 | 45° | c.m. | | |
| 171 | 10686 | 23.06 | 29 | 0° | c.m. | | | 239 | 10860 | 27.54 | 32 | 225° | c.m. | ROMA | |
| 172 | 10733 | 23.30 | 30 | 135° | c.c. | | | 240 | 10692 | 27.62 | 33 | D/ ill. | c.c. | | I |
| 173 | 10845 | 23.32 | 31 | 315° | c.c. | | | 241 | 10797 | 27.81 | 33 | 90° | c.m. | ROMA | I |
| 174 | 10669 | 23.42 | 30 | 225° | c.c. | | | 242 | 10809 | 27.93 | 31 | 45° | c.m. | ROMA | I |
| 175 | 10836 | 23.43 | 32 | 225° | c.m. | ROMA | | 243 | 10617 | 27.96 | 31 | 45° | c.c. | | |
| 176 | 10711 | 23.44 | 34 | 45° | c.m. | ROMA | | 244 | 10615 | 28.10 | 31 | D/ ill. | c.p. | | |
| 177 | 10645 | 23.47 | 29 | D/ ill. | c.c. | | | 245 | 10601 | 28.25 | 33 | R/ ill. | c.c. | | |
| 178 | 10718 | 23.48 | 32 | 135° | c.m. | ROMA | | 246 | 10690 | 28.25 | 32 | D/ ill. | c.c. | | |
| 179 | 10737 | 23.51 | 33 | D/ ill. | c.c. | | | 247 | 10634 | 28.33 | 32 | R/ ill. | c.c. | | |
| 180 | 10705 | 23.57 | 31 | 135° | c.c. | ROMA | I | 248 | 10272 | 28.37 | 30 | 100° | c.c. | | |
| 181 | 10864 | 23.59 | 32 | 225° | c.m. | | I | 249 | 10780 | 28.40 | 34 | R/ ill. | c.c. | | |

| N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. | N. | Inv. | g | mm | Asse | s.c. | leg. | s.d.v. |
|-----|-------|-------|----|---------|------|------|--------|-----|-------|-------|----|---------|------|------|--------|
| 250 | 10822 | 28.41 | 34 | 0° | c.c. | | | 263 | 10732 | 29.11 | 31 | 0° | c.c. | | |
| 251 | 10853 | 28.53 | 33 | 90° | c.m. | | | 264 | 10854 | 29.18 | 33 | 270° | c.m. | ROMA | |
| 252 | 10273 | 28.53 | 31 | 135° | c.c. | | | 265 | 10826 | 29.21 | 33 | R/ ill. | c.c. | | |
| 253 | 10684 | 28.56 | 32 | 90° | c.c. | | | 266 | 10734 | 29.35 | 32 | D/ ill. | c.c. | ROMA | |
| 254 | 10594 | 28.60 | 33 | D/ ill. | c.c. | | | 267 | 10800 | 29.36 | 33 | R/ ill. | c.c. | | |
| 255 | 10772 | 28.74 | 33 | R/ ill. | c.c. | | | 268 | 10856 | 29.36 | 32 | 90° | c.m. | | |
| 256 | 10606 | 28.75 | 31 | R/ ill. | c.c. | | | 269 | 10682 | 29.42 | 31 | 180° | c.m. | | |
| 257 | 10789 | 28.83 | 32 | 315° | c.c. | | | 270 | 10725 | 29.48 | 32 | R/ ill. | c.c. | ROMA | |
| 258 | 10742 | 28.89 | 34 | 45° | c.c. | | | 271 | 10620 | 29.50 | 32 | 315° | c.m. | | |
| 259 | 10655 | 28.92 | 34 | 90° | c.m. | | | 272 | 10532 | 29.57 | 35 | 270° | c.c. | ROMA | |
| 260 | 10741 | 28.95 | 31 | 135° | c.m. | ROMA | | 273 | 10613 | 29.58 | 32 | 180° | c.c. | ROMA | |
| 261 | 10762 | 29.05 | 30 | 180° | c.m. | ROMA | | 274 | 10763 | 29.80 | 31 | 90° | c.m. | ROMA | |
| 262 | 10828 | 29.08 | 31 | R/ ill. | c.c. | | | | | | | | | | |

Semissi. D/ Giove; R/ prora (RRC 197-198B.2)

| N | Inv. | g | mm | Asse | s.c. | leggenda | s.d.v. |
|-----|-------|-------|----|------|------|----------|--------|
| 275 | 10536 | 13.10 | 28 | 45° | c.m. | ROMA | |
| 276 | 10280 | 13.90 | 25 | 135° | c.c. | | |
| 277 | 10281 | 14.05 | 26 | 90° | c.c. | | |
| 278 | 10279 | 14.49 | 27 | 135° | c.c. | | |
| 279 | 10282 | 15.95 | 25 | 45° | c.c. | | |
| 280 | 10278 | 16.34 | 28 | 90° | c.c. | | |
| 281 | 10550 | 16.96 | 28 | 225° | c.c. | ROMA | S |
| 282 | 10316 | 18.63 | 26 | 315° | c.c. | | |

Triente. D/ Minerva; R/ prora (RRC 197-198B. 3)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. |
|-----|-------|------|----|------|------|------------------|--------|
| 283 | 10285 | 8.37 | 21 | 180° | c.c. | | |

Quadranti. D/ Ercole; R/ prora (RRC 197.198B.4)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. |
|-----|-------|------|----|------|------|------------------|--------|
| 284 | 10284 | 4.67 | 19 | 300° | c.c. | | ooo |
| 285 | 10290 | 3.97 | 18 | 315° | c.c. | | ooo |

Sestanti. D/ Mercurio; R/ prora (RRC 197.198B.5)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. |
|-----|-------|------|----|------|------|------------------|--------|
| 286 | 10356 | 3.81 | 18 | 315° | c.m. | | oo |
| 287 | 10246 | 6.01 | 18 | 45° | c.m. | | |
| 288 | 10248 | 5.88 | 18 | 315° | c.c. | | |
| 289 | 10465 | 5.54 | 17 | 90° | c.c. | | |
| 290 | 10369 | 3.64 | 17 | 315° | c.c. | | |
| 291 | 10286 | 4.22 | 20 | 45° | c.c. | | |
| 292 | 10287 | 4.97 | 18 | 180° | c.c. | | |
| 293 | 10288 | 5.21 | 18 | 0° | c.c. | | |
| 294 | 10289 | 5.15 | 18 | 0° | c.m. | | |
| 295 | 10409 | 3.90 | 17 | 180° | c.c. | | |

Riduzione semionciale (91 a.C.)
(peso teorico 13.62 g)

Assi anonimi. D/ Giano; R/ prora (RRC 339.1a)

| N. | Inv. | g | mm | Asse | s.c. | leggenda | s.d.v. |
|-----|-------|-------|----|------|------|----------|--------|
| 296 | 10770 | 13.45 | 33 | 270° | c.m. | | |
| 297 | 10783 | 14.73 | 29 | 225° | c.m. | ROMA | |
| 298 | 10575 | 14.78 | 29 | 45° | c.m. | | I |
| 299 | 10821 | 15.00 | 30 | 90° | c.m. | ROMA | I |
| 300 | 10646 | 15.54 | 29 | 315° | c.m. | ROMA | |

Quadrante. D/ Ercole; R/ prora (RRC 339.4a)

| N. | Inv. | g | mm | Asse | s.c. | leggenda | s.d.v. |
|-----|-------|------|----|------|------|----------|--------|
| 301 | 10359 | 3.34 | 18 | 315° | c.m. | | ooo |

Assi firmati**CN. BAEBIUS TAMPILUS (194-190 a.C.)**

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|---------|------|------------------|--------|------------|
| 302 | 10576 | 26.18 | 34 | 225° | c.c. | TAMP | I | 133.4 |
| 303 | 10573 | 25.98 | 31 | D/ ill. | c.c. | TAMP | I | 133.4 |

BALBUS (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 304 | 10525 | 23.28 | 31 | 45° | c.m. | BAL | | 179.1 |

CLUVIUS SAXULA (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 305 | 10687 | 30.63 | 33 | 90° | c.m. | SAX | I | 180.1 |
| 306 | 10596 | 29.51 | 32 | 225° | c.m. | C.SAX | 180.1 | |
| 307 | 10548 | 26.91 | 30 | 315° | c.m. | SAX | I | 180.1 |

L. CORNELIUS CINNA (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|---------|------|------------------|--------|------------|
| 308 | 10588 | 28.74 | 30 | D/ ill. | c.c. | CINA | | 178.1 |
| 309 | 10583 | 21.53 | 30 | 90° | c.m. | CINA | | 178.1 |

Q. OPIMIUS (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|---------|------|------------------|--------|------------|
| 310 | 10689 | 29.11 | 32 | D/ ill. | c.c. | OPEI; ROMA | I | 190.1 |
| 311 | 10590 | 16.74 | 31 | D/ ill. | c.c. | OPE - - | 190.1 | |
| 312 | 10551 | 21.60 | 32 | 225° | c.c. | OPEI | | 190.1 |

OPIMIUS (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 313 | 10610 | 30.14 | 32 | 135° | c.c. | O- | | 188.1 |

VALERIUS (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 314 | 10700 | 23.80 | 32 | 135° | c.m. | VAL; ROMA | | 191.1 |
| 315 | 10586 | 27.39 | 32 | 180° | c.m. | VAL | | 191.1 |
| 316 | 10574 | 24.44 | 33 | 225° | c.m. | VA - | | 191.1 |

PAPIRIUS TURDUS (169-158 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 317 | 10591 | 23.06 | 32 | 0° | c.m. | TURD | | 193.1 |
| 318 | 10547 | 13.65 | 30 | 315° | c.c. | - URD; ROMA | I | 193.1 |

SEX. ATILIUS SERRANUS (155 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 319 | 10647 | 19.08 | 30 | 225° | c.m. | SA-; ROMA | | 199.2 |
| 320 | 10539 | 32.34 | 32 | 135° | c.m. | SAR | I | 199.2 |
| 321 | 10648 | 19.08 | 30 | 225° | c.c. | SA; ROMA | | 199.2 |
| 322 | 10597 | 20.49 | 30 | 0° | c.m. | SAR | | 199.2 |
| 323 | 10579 | 23.66 | 30 | 135° | c.m. | -RA | | 199.2 |

PINARIUS NATTA (155 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | <i>RRC</i> |
|-----|-------|-------|----|------|------|------------------|--------|------------|
| 324 | 10537 | 28.20 | 33 | 225° | c.m. | NAT 200.2 | | |
| 325 | 10572 | 23.83 | 32 | 0° | c.m. | NAT 200.2 | | |

C. SCRIBONIUS (154 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 326 | 10598 | 18.27 | 33 | 0° | c.m. | SCR | | 201.1 |

C. MAIANUS (153 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 327 | 10534 | 23.45 | 31 | 45° | c.m. | MAIANI | | 203.2 |
| 328 | 10545 | 22.24 | 33 | 0° | c.m. | C.MAIANI; ROMA | | 203.2 |

L. SAUFEIUS (152 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|---------|------|------------------|--------|-------|
| 329 | 10542 | 20.27 | 30 | 45° | c.m. | L.SAUF; ROMA | 204.2 | |
| 330 | 10546 | 31.97 | 33 | 210° | c.m. | - - AUF; ROMA | I | 204.2 |
| 331 | 10776 | 28.69 | 31 | 315° | c.c. | - SAU - | 204.2 | |
| 332 | 10593 | 28.00 | 31 | 0° | c.m. | SAUF | | 204.2 |
| 333 | 10582 | 21.94 | 31 | D/ ill. | c.c. | SAUF; delfino | | 204.2 |
| 334 | 10584 | 25.87 | 30 | 270° | c.m. | SAUF | | 204.2 |
| 335 | 10578 | 25.57 | 32 | 45° | c.m. | - AUF; delfino | I | 204.2 |

P. SULA (151 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 336 | 10650 | 18.65 | 30 | 0° | c.m. | SUL - | | 205.2 |
| 337 | 10600 | 21.73 | 31 | 270° | c.m. | SULA | | 205.2 |

C. IUNIUS (149 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 338 | 10541 | 27.12 | 30 | 90° | c.c. | C.IUNI; ROMA | | 210.2 |

L. SEMPRONIUS PITIO (148 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|--------------------|--------|--------|
| 339 | 10720 | 19.51 | 32 | 90° | c.m. | -TIO | | 216.2a |
| 340 | 10566 | 26.46 | 32 | 180° | c.m. | D/ -TIO; R/L.SEMPR | I | 216.2a |
| 341 | 10565 | 18.81 | 32 | 135° | c.m. | D/PI TIO | | 216.2a |
| 342 | 10564 | 25.72 | 31 | 0° | c.m. | SEM - | | 216.2b |

Q. MARCIUS LIBO (148 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|-------------------|--------|--------|
| 343 | 10522 | 22.24 | 31 | 90° | c.m. | Q.MARC | | 215.2b |
| 344 | 10540 | 22.05 | 31 | 0° | c.m. | Q.MARC.LIBO; ROMA | | 215.2a |
| 345 | 10814 | 26.26 | 31 | 0° | c.m. | -ARC | | 215.2b |
| 346 | 10602 | 26.06 | 32 | 270° | c.c. | MARC | 215.2b | |

M. ATILIUS SERRANUS (148 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|--------|
| 347 | 10587 | 23.73 | 29 | 180° | c.c. | - - TILI | | 214.2a |
| 348 | 10549 | 20.46 | 30 | 45° | c.m. | ATIL -; ROMA | I | 214.2a |

C. TERENCEIUS LUCANUS (147 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|-------------------------------|--------|-------|
| 349 | 10530 | 26.89 | 32 | 225° | c.m. | TER.LUC; ROMA; R/ Vittoria | | 217.2 |
| 350 | 10538 | 21.82 | 34 | 0° | c.m. | TER.LUC; ROMA | 217.2 | |
| 351 | 10850 | 18.01 | 33 | 90° | c.c. | TER | | 217.2 |
| 352 | 10715 | 21.92 | 29 | 225° | c.m. | -R.LUC | | 217.2 |
| 353 | 10685 | 21.30 | 32 | 0° | c.m. | C.T- | | 217.2 |

C. ANTESTIUS CATULUS (146 a.C.)

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|---------|------|--------------------------|--------|-------|
| 354 | 10653 | 21.93 | 30 | 90° | c.m. | TESTI; cucciolo; ROMA | I | 219.2 |
| 355 | 10605 | 31.53 | 32 | D/ ill. | c.c. | cucciolo | | 219.2 |

Assi con simboli o sigle**206-195 a.C.**

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|---------|------|---------------------------|--------|--------|
| 356 | 10571 | 19.10 | 28 | D/ ill. | c.c. | uccello e timone; ROMA | | 117b.1 |

206-195 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 357 | 10533 | 20.40 | 32 | 270° | c.m. | astro; ROMA | | 113.2 |
| 358 | 10816 | 25.94 | 31 | 0° | c.m. | astro; ROMA | | 113.2 |

199-170 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 359 | 10679 | 24.28 | 32 | 270° | c.c. | MA | | 172.2 |
| 360 | 10529 | 25.36 | 32 | 215° | c.m. | MA; ROMA | | 172.2 |

194-190 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 361 | 10671 | 36.20 | 34 | 135° | c.c. | AN; ROMA | | 136.2 |
| 362 | 10558 | 35.84 | 34 | 210° | c.m. | AN; ROMA | I | 136.2 |

189-180 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 363 | 10792 | 29.45 | 33 | 270° | c.m. | toro; ROMA | | 142.2 |
| 364 | 10708 | 22.62 | 31 | 0° | c.m. | toro | | 142.2 |
| 365 | 10699 | 22.36 | 29 | 180° | c.m. | toro; ROMA | | 142.2 |
| 366 | 10691 | 21.56 | 31 | 135° | c.m. | toro; ROMA | | 142.2 |
| 367 | 10616 | 16.38 | 31 | 315° | c.c. | toro; ROMA | | 142.2 |
| 368 | 10544 | 27.62 | 33 | 300° | c.m. | toro | | 142.2 |

179-170 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 369 | 10535 | 24.40 | 33 | 135° | c.m. | delfino | | 160.1 |

169-158 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|---------|------|------------------|--------|-------|
| 370 | 10592 | 22.47 | 32 | 270° | c.c. | ancora | | 194.1 |
| 371 | 10585 | 25.41 | 30 | D/ ill. | c.c. | ancora | | 194.1 |

169-158 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|------|------|------------------|--------|-------|
| 372 | 10771 | 23.42 | 33 | 180° | c.m. | A; ROMA | I | 192.1 |
| 373 | 10659 | 25.65 | 31 | 270° | c.m. | A; ROMA | | 192.1 |
| 374 | 10622 | 21.85 | 33 | 180° | c.m. | A; ROMA | | 192.1 |
| 375 | 10611 | 25.21 | 32 | 135° | c.m. | A | | 192.1 |

169-158 a.C.

| N. | Inv. | g | mm | Asse | s.c. | leggenda/simbolo | s.d.v. | RRC |
|-----|-------|-------|----|---------|------|-------------------|--------|-------|
| 376 | 10681 | 27.97 | 34 | D/ ill. | c.c. | elmi dei dioscuri | | 181.1 |
| 377 | 10648 | 20.15 | 33 | D/ ill. | c.c. | elmi dei dioscuri | | 181 |

Il problema del rafforzamento ponderale del denario romano nella seconda metà del II sec. a.C. attraverso l'esame statistico

Cinzia GENEROSO*

L'applicazione del metodo statistico¹ allo studio degli aspetti ponderali del denario repubblicano costituisce un tentativo di chiarire ed eventualmente confermare alcuni dati ponderali decisamente insoliti già emersi durante uno studio da me condotto secondo il metodo tradizionale, su un cospicuo numero di esemplari.

I primi dati ponderali da verificare sono stati quelli relativi al tesoretto di San Lorenzo del Vallo. Tale ripostiglio, rinvenuto nella provincia di Cosenza (Bruttium), è costituito da 311 denari romani repubblicani che vanno dalle prime serie anonime, databili al 211 a.C. ad emissioni che scendono fino al 102 a.C. (cronologia Crawford). In esso, gli esemplari più antichi, che pure appaiono ben conservati, sono più leggeri degli esemplari più recenti².

Come è noto, invece, il Crawford³ sostiene che, nell'arco di tempo ricoperto dal tesoretto di S. Lorenzo, il denario ha attraversato due fasi ponderali: la più antica (che andrebbe dal 211 al 141 a.C.), definita dallo studioso «sestantale», cui corrisponde un denario di 4,50 g; la più recente, definita «onciale» (che inizierebbe nel 141 a.C.) cui corrisponde un denario di 3,90 g.

Dinanzi a questa contraddizione evidente fra i dati del tesoretto e le affermazioni del Crawford, il ricorso alla indagine statistica mi è sembrato utile per conferire maggiore attendibilità a quanto da me in precedenza osservato.

Per meglio lavorare, ho schematizzato la composizione ponderale del tesoretto: si sono così distinti tre gruppi di esemplari, ciascuno dei quali caratterizzato da tre diverse cronologie e da tre diversi tipi di pesi (Fig. 1):

I Gruppo: denari anonimi e con simbolo

211-189/180 a.C.

ess. 15 4,03-2,86 g peso medio 3,50 g

II Gruppo: denari anonimi, con simbolo, con firma

189/180 - 141 a.C.

ess. 30 4,22-3,01 g peso medio 3,63 g

III Gruppo: denari con firma

141-102 a.C.

ess. 266 4,22-3,12 g peso medio 3,90 g

Fig. 1. Ripartizione cronologica del tesoretto di San Lorenzo del Vallo (CS)

- il primo gruppo è costituito dai 15 denari più antichi, databili tra il 211 ed il 189/180 a.C., il cui peso va da 4,03 g a 2,86 g.

- il secondo gruppo, con una cronologia intermedia che va dal 189/180 al 141 a.C., è costituito da 30 esemplari il cui peso va da 4,22 g a 3,01 g; la media aritmetica di questo gruppo è di 3,63 g, vicina dunque allo standard onciale ma ancora non definibile come tale perchè costituita da pezzi che precedono cronologicamente gli esemplari onciali contrassegnati dal segno di valore XVI.

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1 Per motivi di spazio ho preferito non presentare in questo lavoro le tabelle dei calcoli che, tuttavia, mi riservo di fornire dietro esplicita richiesta.

2 C. GENEROSO, *Il tesoretto di San Lorenzo del Vallo: il problema del rafforzamento ponderale del denario nella seconda metà del II sec. a.C.*, in *BollNum*, di prossima pubblicazione.

3 M.H. CRAWFORD, *Roman Republican Coinage*, Cambridge, 1974, *passim*.

- il terzo gruppo, infine, è costituito dai rimanenti 266 esemplari databili dopo il 141 a.C., perchè il più antico di essi presenta il segno XVI, il cui peso oscilla tra i 4,22 g e i 3,12 g.

Conoscendo già il peso medio di ognuno dei tre gruppi campione, ho calcolato la media delle rispettive popolazioni cui questi gruppi appartengono. Per fare ciò ho applicato il seguente metodo : ho raccolto i dati in classi, ho trovato un punto di mezzo convenientemente intero, ho calcolato le frequenze assolute, le frequenze relative, le medie per dati raggruppati in classi, la varianza dei dati raggruppati, la deviazione standard per dati raggruppati. Ottenuta infine la media, ho applicato la «teoria della stima dei grandi campioni» al fine di ricavare la probabilità che la media ponderale di ogni popolazione corrispondente a ciascuno dei tre gruppi di monete, cadesse al 99,73 % tra i valori ottenuti dall'analisi dei campioni.

I risultati si possono così schematizzare (Fig. 2) :

| | Cronologia | N. ess. | \bar{x} = Media Campione | μ = Media Popolazione |
|------------|-------------------|---------|----------------------------|---------------------------|
| I Gruppo | 211-189/180 a.C. | 15 | 3,55 g | 3,17 g < μ < 3,94 g |
| II Gruppo | 189/180 -141 a.C. | 30 | 3,59 g | 2,85 g < μ < 4,34 g |
| III Gruppo | 141-102 a.C. | 266 | 3,81 g | 3,63 g < μ < 3,93 g |

Fig. 2. San Lorenzo del Vallo. Analisi statistica

- Per il primo gruppo, la media del campione (\bar{x}) è di 3,55 g, la media della popolazione (μ) cui appartiene il campione è compresa tra i 3,17 g ed i 3,94 g.

- Per il secondo gruppo, la media del campione (\bar{x}) è di 3,59 g, la media della popolazione (μ) cui appartiene il campione è compresa tra i 2,85 g ed i 4,34 g.

- Per il terzo gruppo, la media del campione (\bar{x}) è di 3,81 g, la media della popolazione (μ) cui appartiene il campione è compresa tra i 3,63 g ed i 3,93 g.

I dati fin qui esposti confermano che il peso medio della popolazione dei denari più antichi (I gruppo) è inferiore al peso medio della popolazione dei denari più recenti (III gruppo); inoltre, la media ponderale della popolazione del II gruppo presenta una oscillazione molto ampia.

Poichè a questo punto del lavoro i risultati dell'analisi statistica apparivano piuttosto sorprendenti, ho esteso l'applicazione del metodo ad un altro gruppo di materiali; si tratta di quattro ripostigli molto simili a quello di S. Lorenzo, rinvenuti a Isola Capo Rizzuto (CZ), S. Domenica di Tropea (CZ), Cantorato (CZ), Filogaso (CZ)⁴. La loro analogia col nostro tesoretto consiste nel fatto che anch'essi sono stati rinvenuti in Calabria e la loro composizione è analoga a quella del tesoretto per primo analizzato. Escludendo gli esemplari che superano la soglia cronologica più bassa del tesoretto di S. Lorenzo, cioè il 102 a.C., essi costituiscono un insieme di 116 esemplari. Il metodo di lavoro applicato su di essi è uguale a quello usato per S. Lorenzo e le operazioni eseguite sono le medesime : divisione in tre gruppi cronologici, divisione in classi all'interno di ciascun gruppo, calcolo della media, calcolo della variazione standard, deduzione della media ponderale. I risultati possono essere così sintetizzati (Fig. 3) :

| | Cronologia | N. Ess. | \bar{x} = Media Campione | μ = Media Popolazione |
|------------|------------------|---------|----------------------------|---------------------------|
| I Gruppo | 211-189/180 a.C. | 8 | 3,71 g | 3,31 g < μ < 4,10 g |
| II Gruppo | 189/180-141 a.C. | 11 | 3,65 g | 3,04 g < μ < 4,25 g |
| III Gruppo | 141-102 a.C. | 97 | 3,80 g | 3,62 g < μ < 3,98 g |

Fig. 3. Altri tesoretti calabresi. Analisi statistica

- il primo gruppo, databile tra il 211 ed il 189/180 a.C. è costituito da 8 esemplari con un peso medio (\bar{x}) di 3,71 g, il peso medio della popolazione (μ) è compreso tra 3,31 g e 4,10 g;
- il secondo gruppo, databile tra il 189/180 ed il 141 a.C. è costituito da 11 esemplari con un peso medio (\bar{x}) di 3,65 g, il peso medio della popolazione (μ) è compreso tra 3,04 g e 4,25 g;
- il terzo gruppo, databile tra il 141 ed il 102 a.C. è costituito da 97 esemplari con un peso medio (\bar{x}) di 3,80 g, il peso medio della popolazione (μ) è compreso tra 3,62 g e 3,98 g.

Anche per questi materiali possiamo osservare il fenomeno già rilevato per S. Lorenzo : il peso medio della popolazione dei denari più recenti è maggiore del peso medio della popolazione dei denari più antichi; il peso medio della popolazione del gruppo intermedio presenta una forte oscillazione.

In definitiva, possiamo affermare che i quattro tesoretti contengono esemplari di fine III sec. e di inizio II sec. a.C. che sono piuttosto lontani dal peso standard di 4,50 g perchè il dato statistico evidenzia una grande oscillazione ponderale che tocca valori molto bassi quali i 3,31 g ed i 3,04 g rispettivamente per il I e per il II gruppo ma non sfiora assolutamente il valore alto di 4,50 g.

Il terzo gruppo, invece, si presenta meglio assestato perchè caratterizzato da un'oscillazione minima tra i 3,62 e 3,98 g.

Poichè la mia indagine ha preso le mosse dalla necessità di confermare attraverso un criterio scientifico gli insoliti dati ponderali del tesoretto di S. Lorenzo, non mi rimane che confrontare i dati statistici dei quattro tesoretti con quelli relativi al tesoretto di S. Lorenzo del Vallo (Fig. 4); dal confronto scaturisce una corrispondenza evidente : nel I gruppo la media della popolazione di S. Lorenzo si trova fra i 3,17 g ed i 3,94 g; quella degli altri tesoretti fra i 3,31 g ed i 4,10 g; nel II gruppo il tesoretto di S. Lorenzo presenta valori compresi tra 2,85 g e 4,34 g; gli altri tesoretti fra 3,04 g e 4,25 g; nel III gruppo la media di S. Lorenzo è compresa fra 3,63 g e 3,93 g, quella degli altri tesoretti è tra 3,62 g e 3,98 g.

| | μ I Gruppo 211-189/180 a.C. | μ II Gruppo 189/180-141 a.C. | μ III Gruppo 141-102 a.C. |
|------------|------------------------------------|-------------------------------------|----------------------------------|
| S. LORENZO | | | |
| DEL VALLO | 3,17 g < μ < 3,94 g | 2,85 g < μ < 4,34 g | 3,63 g < μ < 3,93 g |
| ALTRI | | | |
| TESORETTI | 3,31 g < μ < 4,10 g | 3,04 g < μ < 4,25 g | 3,62 g < μ < 3,98 g |

Fig. 4. Confronto dell'analisi statistica tra S. Lorenzo del Vallo e gli altri tesoretti

Essendo dunque evidente una fortissima corrispondenza tra le medie delle popolazioni cui appartengono i diversi tesoretti, possiamo arguire che il ripostiglio di S. Lorenzo del Vallo e quelli di Isola Capo Rizzuto, Filogaso, S. Domenica di Tropea, Cantorato, all'incirca coevi, tutti rinvenuti in Calabria, appartengono ad una medesima popolazione che, con i suoi pesi medi, mette in dubbio la teoria della degradazione ponderale del denario e propone, per la seconda metà del II sec. a.C., una sorta di «rafforzamento» che si evince sia dalla scomparsa delle forti oscillazioni ponderali, sia dalla tendenza all'aumento di peso.

I dati statistici esposti e le considerazioni da essi derivanti sono evidentemente relativi ad un campione significativo ma senza dubbio esiguo rispetto a tutta la popolazione dei denari repubblicani a noi noti.

Poichè dunque i risultati del lavoro attaccano una ben nota teoria apparentemente suffragata dalle fonti⁵, ho tentato di ampliare il più possibile il campione della mia indagine, al fine di poter inferire con maggiore certezza sui dati di una popolazione più ampia, relativa ad un campione più ampio.

⁵ Plin., *Nat. Hist.*, 44-46.

Tuttavia, molti ostacoli si sono presentati al mio lavoro : uno in particolare è costituito dalla mancanza di pubblicazioni di materiali corredati dai rispettivi pesi e dalla esigua presenza, sulle pubblicazioni note, dei denari più antichi che sono, in questa indagine, i più interessanti ed i più discutibili.

In definitiva, pur consapevole che il limite del mio lavoro potrebbe essere individuato nelle ridotte dimensioni del campione preso in esame e riservandomi di intraprendere nuove analisi di materiali per poter meglio verificare i risultati fin qui esposti, posso affermare che i dati emersi da questo studio sono indiscutibili : esiste una popolazione di denari con caratteristiche piuttosto diverse rispetto alla popolazione dei denari già nota che evidenzia, invece, i due standard tradizionali sestantale ed onciale.

Dinanzi a questi risultati, mi sembra interessante far notare che, qualora questi primi dati dovessero essere confermati attraverso ulteriori approfondimenti, il fenomeno del «rafforzamento» ponderale esposto in questo lavoro non sarebbe l'unico fattore nuovo che caratterizza la monetazione romana repubblicana della seconda metà del II sec. a.C.

Infatti, contemporaneamente ad esso, va ricordata l'apparizione sul denario di una nuova tipologia di origine equestre e borghese che soppianta i tipi tradizionali celebranti le antiche divinità e le passate glorie della Repubblica. Il denario diventa uno strumento di propaganda politica, usato dalle classi equestri impegnate nella scalata al potere politico. Entrambe le innovazioni si daterebbero in un momento importante della Repubblica : Roma aveva conquistato anche l'Oriente e poteva meglio disporre di metalli pregiati, schiavi e prodotti fatti confluire dalle province⁶. Da queste province la classe equestre ricavava gran parte del proprio potere politico⁷. L'assenza di gravi conflitti, il miglioramento della situazione economica e l'abilità del nuovo ceto imprenditoriale equestre, che usava la magistratura monetaria come trampolino di lancio per conquistare la vita politica, possono aver prodotto il «rafforzamento» ponderale del denario sopra evidenziato che rimarrebbe altrimenti incomprensibile.

D'altra parte, non bisogna dimenticare sulla base delle affermazioni del Crawford⁸, l'ipotesi dell'esistenza di zecche romane in alcune città italiote tradizionalmente battenti moneta. In tal caso, potrebbe essere possibile che gli esemplari contenuti nei tesoretti da me analizzati, tutti rinvenuti nel Bruttium, siano stati emessi proprio da queste zecche dell'Italia Meridionale le quali, durante la fine del III sec. e la prima metà del II sec. a. C., forse a causa della crisi provocata dalla guerra annibalica e successivamente dal perdurare dello stato di emergenza dovuto alle guerre condotte in Macedonia contro Filippo V, Antioco III e Perseo, possono aver coniato secondo uno standard alleggerito e, in seguito, con lo stabilizzarsi della situazione economica nella seconda metà del II sec. a.C., possono aver allineato il loro standard a quello ufficiale.

6 CI. NICOLET, *Rome et la conquête du monde méditerranéen*, 264-27 a.C., Vendôme, 1991, p. 247-248, 255-258.

7 *Ibidem*, p. 260-263, 266-267.

8 M.H. CRAWFORD, *Coinage and Money under the Roman Republic*, London, 1985, p. 70-74, 110. L'autore ritiene che le città di Paestum, Vibo, Rhegium, Copia, Brundisium, Catana e forse Velia ed Heraclaea emettano moneta romana durante la seconda metà del II sec. a.C.

Maritime Thematik und das Seeräuberproblem auf römisch-republikanischen Münzen in der Zeit zwischen den Bürgerkriegen

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Der schnelle Sieg des Pompeius über die Seeräuber im Jahre 67 v. Chr. fand auch in der stadtrömischen Münzprägung Erwähnung. So weiß man seit Baldwin Brett¹, daß das *aplustre* auf der Rs. eines Denars des Faustus Cornelius Sulla (C. 426/4) auf die Beseitigung der Seeräuberplage zu beziehen ist. Dieselbe Thematik erkannte Kraft² im Denar des Ser. Sulpicius (C. 438/1) und Meyer³ in einem Denar des kurulischen Ädilen M. Plaetorius Cestianus (C. 409/1). Alle drei Denartypen sind als Propagandamünzen für Pompeius zu verstehen.

Auffälligerweise tauchen in den siebziger Jahren des ersten vorchristlichen Jahrhunderts zahlreiche Denare auf, die maritime Symbole beinhalten. Sie sollen im folgenden einer neuen Interpretation zugeführt werden.

Auf der Rs. des Denars des Cn. Cornelius Lentulus Marcellinus (C. 393/1) aus den Jahren 76/75 findet sich eine Zusammenstellung von Symbolen, die es interpretatorisch zu verknüpfen gilt: Zepter, Kranz, Globus und Steuerruder. Crawford bringt diesen Denar mit dem Krieg gegen den Rebellen Sertorius in Spanien in Verbindung und sieht allgemein in der Rs.-Symbolik Roms Anspruch auf die Herrschaft *terra marique*⁴. Aber das Steuerruder, das die römische Herrschaft auf dem Meere symbolisiert, läßt sich noch genauer erklären. Sertorius wußte genau, wie wichtig für ihn Einflußmöglichkeiten zur See sein mußten. Er baute eine eigene Flotte⁵ und verbündete sich mit den kilikischen Piraten (Plut., *Sert.*, 7). Seinen Kriegshafen richtete Sertorius in Dianium (heute Denia) an der spanischen Ostküste ein (Strab., 3, 159), die in der Auseinandersetzung mit Pompeius eine wichtige Rolle spielen mußte⁶. Hier war es auch, wo die Unterhändler des Mithradates landeten, um mit Sertorius ein Bündnis gegen Rom zustande zu bringen (Cic., *Verr.*, 2, 1, 87). Die Seeräuber hatten den Siegesruhm des Sertorius auch in der östlichen Welt verbreitet, so daß sie letztendlich für die Verhandlungen zwischen ihm und dem König von Pontos im Winter 76/75 und das daraus resultierende Bündnis verantwortlich waren. Mithradates gestand Sertorius vertraglich 3000 Talente und 40 Schiffe zu, mit denen dieser seine eigene Zufuhr sichern bzw. die des Pompeius abschneiden konnte⁷. Rom mußte also den Krieg gegen Sertorius und seine Verbündeten zu Lande und zu Wasser führen.

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Vgl. zu allen hier besprochenen Denartypen die ausführlicheren Interpretationen in meiner Dissertation *Die stadtrömische Münzprägung der Jahre 78-50 v. Chr. zwischen politischer Aktualität und Familienthematik. Kommentar und Bibliographie*, die voraussichtlich 1992 unter diesem Titel erscheinen wird.

¹ A. BALDWIN BRETT, *The Aphlaston, Symbol of Naval Victory or Supremacy on Greek and Roman Coins*, in *Transactions of the International Numismatic Congress*, London, 1936, ed. by J. ALLEN, H. MATTINGLY, E.S. G. ROBINSON, London, 1938, S. 31.

² K. KRAFT, *Taten des Pompeius auf den Münzen*, in *JNG*, 18, 1968, S. 8 ff.

³ H. MEYER, *Vulcan und Isis in der Sala Rotonda (Vatikan). Ein Beitrag zur Kunst um Pompeius d. Gr.*, in *RendPontAcc*, 53-54, 1980-1982, S. 266 f.

⁴ M.H. CRAWFORD, *Roman Republican Coinage*, I, Cambridge, 1974, S. 409.

⁵ A. SCHULTEN, *Sertorius*, New York, 1975 (= *Ndr* Leipzig, 1926), S. 44.

⁶ *Ibidem*, S. 99.

⁷ *Ibidem*, S. 106 f.

Der Denar des Marcellinus wäre also folgendermaßen zu lesen : der Prägebeamte erwartet einen Triumph (Zepter und Lorbeerkranz) bzw. Sieg zu Lande und zu Wasser über den Rebellen Sertorius. Voraussetzung dafür sind die Erringung der Seeherrschaft (Steuerruder) und der Herrschaft auf der iberischen Halbinsel und die damit verbundene Wahrung der Weltherrschaft (Erdglobus) des römischen Volkes (*Genius populi Romani* auf der Vs.).

Wenn Deutungen von republikanischen Denaren versucht werden, greift die Forschung häufig auf den Lehrsatz zurück, daß deren Bilder bis zur Zeit Caesars in der Regel Familiengeschichte beinhalten. Zumeist geschieht dies jedoch ohne jegliche Grundlage. Das soll an einem Denartyp des L. Lucretius Trio (C. 390/2) verdeutlicht werden, dessen Vs. den Kopf Neptuns mit Lorbeerkranz, dessen Rs. einen nach rechts auf einem Delphin reitenden Cupido zeigt. In diesem Denar spiegelt sich also eindeutig Seethematik wider.

In der Forschung wird der Lucretius-Denar nahezu geschlossen mit C. Lucretius Gallus in Verbindung gebracht. Dieser wurde im Jahre 181 v. Chr. zum *duumvir navalis* gewählt (Liv., 40, 26, 8), «zum Schutz der italischen Küsten gegen ligurische und istrische Seeräuber»⁸.

Von irgendwelchen Aktionen des *duumvir navalis* C. Lucretius Gallus ist jedoch nichts überliefert, weder Erfolge noch Mißerfolge. Im Jahre 171 v. Chr. erhielt C. Lucretius Gallus als Prätor den Oberbefehl über die römische Flotte. Das bedeutet aber nicht etwa, daß er sich als *duumvir navalis* bewährt haben mußte; denn er erloschte den Oberbefehl (Liv., 42, 28, 5; 31, 7, 9). Livius berichtet auch hier über keinen Seerfolg des Lucretius – vielmehr schickte der Prätor mangels Bedarf die von den Verbündeten gesandten Schiffe wieder zurück (Liv., 42, 56, 5-6) – bezeichnet aber sein Flottenkommando auch nicht ausdrücklich als Mißerfolg. Möglicherweise aber trug Lucretius gar eine Mitschuld an einer Niederlage, die den Römern den Verlust von zwanzig Proviantschiffen und vier Fünfruderern brachte, als der Makedonenkönig Perseus die römische Flotte bei Oreos auf Euböa angriff⁹. Seine eigentliche Leistung vollbrachte er auf dem Lande : die Eroberung und Zerstörung von Haliartos und die gewaltlose Übernahme von Thisbe in Böotien (Liv., 42, 63, 1-12).

Auch die Art und Weise der Ausübung seines Kommandos stieß auf heftige Kritik. C. Lucretius Gallus tat sich in Ostmittelgriechenland durch eine grausame Kriegsführung hervor (Liv., 43, 4, 5), worüber sich die verbündeten Griechen in Rom beschwerten. Er wurde schließlich zu einer Geldstrafe von 1 Million Assen verurteilt, unter Zustimmung aller fünfunddreißig Tribus (Liv., 43, 8, 9-10).

Also : Weder die Person des C. Lucretius Gallus noch seine Leistungen zur See, soweit sie überhaupt vorhanden waren, könnten den Münzmeister L. Lucretius Trio veranlaßt haben, durch einen Münztyp, der zweifellos Seethematik zum Inhalt hat, an diesen Vorfahren zu erinnern. Auch Zehnacker erkannte, daß C. Lucretius Gallus nicht recht geeignet war, um auf einer Münze verewigt zu werden. Doch fügte er ohne Konsequenz hinzu : «Cela ne paraît pas avoir généré Lucretius Trio»¹⁰.

Daher soll im folgenden der Verdacht erhärtet werden, daß der Denar des L. Lucretius Trio mit Neptun und Delphinreiter allgemein an den Krieg der Römer gegen die Seeräuber aufmerksam machen sollte, der während der Jahre 76 bzw. 74¹¹, den vorgeschlagenen Prägedaten, im Gange war.

⁸ F. MÜNZER, *Lucretius* (23), in *RE*, XIII, 2, 1927, S. 1685.

⁹ *Plut.*, *Aem.*, 9, 2. Vgl. F. MÜNZER, *a. O.*, S. 1685.

¹⁰ H. ZEHNACKER, *Moneta. Recherches sur l'organisation et l'art des émissions monétaires de la république romaine (289-31 av. J.-C.)*, I, Rom, 1973, S. 513, A.4.

¹¹ M.H. CRAWFORD, *a. O.*, I, S. 404 : 76 v. Chr.; Ch. HERSH und A. WALKER, *The Mesagne Hoard*, in *ANSMN*, 29, 1984, S. 103-134, Taf. 2 : 74 v. Chr.

Zur Münze selbst : Durch den lorbeerbekränzten Meeresgott Neptun auf der Vs. wird eindeutig Triumph- und Siegesthematik geboten. Der Münzmeister hofft also mit Hilfe des siegreichen Neptun auf einen Triumph über die Seeräuber.

Auf der Rs. ist ein Delphin zu erkennen, auf dem ohne Zweifel der geflügelte Cupido reitet¹². Interessant sind in diesem Zusammenhang die etwa gleichzeitig geprägten Denare des C. Egnatius Maximus (C. 391/1-3), die ebenfalls den Cupido abbilden, einmal als Büste und zweimal als Begleiter der Venus. Cupido kann also stellvertretend für die Stammutter des römischen Volkes und dessen genealogische Herkunft stehen.

Ein Delphin symbolisiert auf einem im Jahre 49 geprägten Denar des Proquästors Varro (C. 447/1a) Seeherrschaft, genauer die Seeherrschaft der Pompeianer¹³. Auch auf dem Lucretius-Denar meint der Delphin mit Sicherheit ebenfalls Seeherrschaft, die durch den Cupido präzisiert wird. Der Münzmeister L. Lucretius Trio fordert hier die Seeherrschaft für das römische Volk.

Die Seeräuber, zunächst von den Römern wegen der Lieferung von Sklaven ertragen, waren seit der Wende vom zweiten zum ersten vorchristlichen Jahrhundert nicht nur zu einer Plage, sondern auch zu einer ernsthaften Gefahr geworden. Sie störten den Reise- und vor allem den Handelsverkehr im gesamten Mittelmeerraum erheblich, sie plünderten ganze Küstengebiete und Inseln und nahmen vornehme Geiseln, um hohe Lösegelder zu erpressen. Zudem unterstützten die Piraten, wie bereits erwähnt, Roms Kriegsgegner Mithradates und Sertorius, was von römischer Seite natürlich nicht geduldet werden konnte. Auch wurden durch die Abschnürung der sizilischen und überseeischen Getreidelieferungen die Lebensmittelversorgung der Hauptstadt erheblich gestört¹⁴.

Als Gegenmaßnahmen starteten die Römer zwei größere Unternehmungen, zunächst recht erfolgreich in den Jahren 78-74 unter P. Servilius Vatia, erfolglos hingegen von 74-71 unter M. Antonius Creticus. Der Münzmeister L. Lucretius Trio hofft mit Hilfe des siegreichen Neptun auf einen Triumph über die Seeräuber und somit auf die Wiederherstellung der Seeherrschaft des römischen Volkes, die zum einen wieder sichere Seehandelswege garantieren, zum anderen aber den Kriegsgegnern Mithradates und Sertorius wichtige Verbündete nehmen würde.

Es fällt auf, daß um die Wende vom zweiten zum ersten Jahrhundert Angehörige der *gens Lucretia* auf Delos nachgewiesen werden können, wo sie wahrscheinlich als *negotiatores* fungierten¹⁵. Auch nach der Plünderung von Delos durch Mithradates und die ihn unterstützenden Piraten im Jahre 88, als zwanzigtausend Bewohner von Delos getötet und viele nach ihrer Gefangennahme versklavt worden sein sollen, dürften Angehörige der *gens Lucretia* auch weiterhin auf Delos Handelsgeschäften nachgegangen sein¹⁶.

¹² Vgl. den Denar des Münzmeisters Mn. Cordius Rufus (C. 463/3).

¹³ Ch. BATTENBERG, *Pompeius und Caesar. Persönlichkeit und Programm in ihrer Münzpropaganda*, Diss. Marburg/Lahn, 1980, S. 85. In der Nachfolge dieses Varro-Denars steht der Denar des Mn. Cordius Rufus (C. 463/3) für die auf den Venussohn Caesar übergegangene Seeherrschaft (Ch. BATTENBERG, *a. O.*, S. 129).

¹⁴ Vgl. zur Seeräuberthematik die Aufsätze von E. MAROTI, *Die Rolle der Seeräuber in der Zeit der mithradatischen Kriege*, in *Ricerche storiche ed economiche in memoria di C. Barbagallo*, a cura di L. DI ROSA, Vol. I, Napoli, 1970, S. 481-493; ID., *Die Rolle der Seeräuberei zur Zeit der römischen Bürgerkriege*, in *Das Altertum*, 7, 1961, S. 32-41; ID., *Der Sklavenmarkt auf Delos und die Piraterie*, in *Helikon*, 9-10, 1969-1970, S. 24-42.

¹⁵ Vgl. J. HATZFELD, *Les Italiens résidant à Délos mentionnés dans les inscriptions de l'île*, in *BCH*, 36, 1912, S. 47 f.

¹⁶ E. MAROTI, *Sklavenmarkt*, *a. O.*, S. 40 : «Dies bedeutet aber keineswegs, daß die Insel dadurch völlig vernichtet wurde, denn die Negotiatoren aus Italien verließen noch nicht endgültig die Insel.

Schon ein erstes Eingreifen Roms gegen die Seeräuber, im Jahre 102 von M. Antonius Orator geleitet, hatte dem ägäischen Handelszentrum Delos eine besondere Fürsorge zukommen lassen. Die Piraten durften die Insel nicht mehr ansteuern. Trotzdem scheint Delos auch in der Folgezeit von der Seeräuberei, die sich auf die Handelsinteressen der ansässigen *negotiatores* negativ auswirkte, in Mitleidenschaft gezogen worden zu sein. Zuletzt hatte in den Jahren 69, vielleicht aber schon 74, der Piratenführer Athenodorus hier große Verwüstungen angerichtet, die Tempel gelpündert und Bewohner der Insel verschleppt¹⁷.

Hinter der eigentlichen Aussage dieses Lucretius-Denars, der Forderung der Seeherrschaft für das römische Volk durch die Säuberung des gesamten Mittelmeeres von den Piraten, könnte somit auch eine familienbezogene Motivation des Münzmeisters L. Lucretius Trio gestanden haben; denn die Tätigkeit der auf Delos beheimateten römischen und italischen Händler wurde von den Seeräubern auf unerträgliche Weise eingeschränkt und beschnitten.

Auch der Denar des Q. Crepereius Rocus (C. 399/1)¹⁸ mit Amphitrite auf der Vs. und dem einen Dreizack schwingenden Neptun in Seepferde-Biga auf der Rs. hat noch keine befriedigende Erklärung gefunden. Babelon¹⁹ machte zwei Vorschläge, die aufgrund der fehlenden literarischen Bestätigung als äußerst unsicher angesehen werden müssen. Danach soll Q. Crepereius selbst eine wichtige Aufgabe innerhalb der römischen Flotte innegehabt oder an einen Erfolg zur See eines seiner Vorfahren erinnert haben.

Crawford²⁰ möchte die Meeresthematik auf Vs. und Rs. mit den *negotiatores* der *gens Crepereia*, die im Osten wirkten, erklären. Auch wenn die Bildmotive für im Osten tätige Händler typisch sein sollten, wäre diese Interpretation doch zu vordergründig und unter dem Gesichtspunkt Familiengeschichte bzw. – propaganda ohne Relevanz. Das Händlerdasein von Familienmitgliedern im Osten stellt schließlich keine besondere Leistung dar, derer sich der Münzmeister hätte rühmen können.

Wiseman²¹ vermutet hinter der Darstellung von Amphitrite und Neptun den Bezug auf einen mutmaßlichen Vorfahren des Münzmeisters, der unter der Nachkommenschaft des Meeresherrn zu finden sei.

Die beiden letztgenannten Deutungen lassen jedoch die offenkundige Kampftematik der Rs. gänzlich außer acht. Zehnacker²² möchte die Rs.-Darstellung auf den Sieg des Pompeius über die Seeräuber beziehen, muß aber eingestehen, daß eine Datierung ins Jahr 67 (noch?) nicht möglich ist.

Zahlreiche geflüchtete Kaufleute kehrten zurück, alsbald erschienen auch neue und waren hier in sehr positiver Weise tätig.».

17 Phlegon, *FGH*, III, 606, 12 setzt die Plünderung von Delos ins Jahr 69. H.B. MATTINGLY, *M. Antonius, C. Verres and the Sack of Delos by the Pirates*, in *φιλικὰς χάριν. Miscellanea di studi classici in onore di E. Manni*, tomo IV, Rom, 1980, S. 1499) bezweifelt diese Nachricht des Phlegon von Tralles und datiert in den Sommer oder Herbst 74.

18 M.H. CRAWFORD, *a. O.*, I, S. 410 : 72 v. Chr.; Ch. HERSH und A. WALKER, *a. O.*, Taf. 2 : 69 v. Chr.

19 E. BABELON, *Description historique et chronologique des monnaies de la république romaine*, I, Bologna, 1963 (= Ndr Paris, 1885-1886), S. 439. Ebenso H.A. GRUEBER, *Coins of the Roman Republic in the British Museum*, I, Oxford, 1970 (= Ndr London, 1910), S. 408.

20 M.H. CRAWFORD, *a. O.*, I, S. 411.

21 T.P. WISEMAN, *Legendary Genealogies in Late-Republican Rome*, in *Greece and Rome*, 21, 1974, S. 158. Vgl. aber J. DE ROSE EVANS, *Roman Republican Coin Types and Familial Propaganda*, in *Proceedings of the 10th International Numismatic Congress, London, September 1986*, Wetteren, 1989, S. 143-146, die zeigt, wie selten die römischen Münzmeister von der durchaus gegebenen Möglichkeit Gebrauch machten, ihre legendären Vorfahren ins Münzbild zu bringen.

22 H. ZEHNACKER, *a. O.*, I, S. 595.

So dürfte auch der Crepereius-Denar mit der Seeräuberthematik in Zusammenhang stehen und auch hier der Schlüssel zur Interpretation in der umfangreichen Handelseinschränkung liegen. Die Rs.-Darstellung des den Dreizack schwingenden Neptun in einer Seepferde-Biga bedeutet Seeherrschaft, bedeutet einen erhofften Sieg über die schon lange währende Seeräuberplage, die es endlich entschlossen anzupacken galt.

Der Münzmeister Q. Crepereius Rocus sprach mit seinem Denar wohl nicht nur im Sinne Roms und ganz Italiens, sondern auch für den Teil seiner Familie, deren Mitglieder als *negotiatores* tätig waren²³. Möglicherweise waren einige dieser *Crepereii* von den Aktionen der Seeräuber betroffen. So ist etwa in der Nähe von Brundisium, dessen Küstengebiet von den Piraten angegriffen worden war (App., *Mithr.*, 93), ein Crepereius nachzuweisen. *Crepereii* waren auch auf Delos zu Hause²⁴. Der Piratenführer Athenodorus hatte hier große Verwüstungen angerichtet und Bewohner der Insel verschleppt (Phlegon, *FGH* III, 606, 12).

Die Vs. des Denars des Q. Crepereius Rocus wurde komplementär zur Rs. gewählt. Sie zeigt, was allenthalben akzeptiert wird, Amphitrite, die Gattin Neptuns. Beiden opferten die Seeleute, um sich einer glücklichen Rückkehr in die Häfen zu versichern (Arr., *De Ven.*, 34).

Die Bilder des Denars des L. Cossutius Sabula (C. 395/1)²⁵ scheinen auf den ersten Blick nicht auf Seeräuberthematik hinzudeuten: Vs. Medusenhaupt, Rs. Bellerophon einen Speer schleudernd und auf Pegasus nach rechts reitend.

Babelon²⁶ stellte Übereinstimmungen dieses Denars mit Prägungen der Stadt Korinth fest. Doch trifft seine wie auch Gruebers²⁷ Folgerung, der Münzmeister habe in Griechenland irgendein Amt, vielleicht das eines Proprätors oder Proquästors, bekleidet, nicht zu. Grueber meinte weiter, daß der Cossutius-Denar offensichtlich einen Familienbezug beinhalte. Doch wird dies von keiner Überlieferung untermauert²⁸.

Auch die Erklärungen der neueren Forschung sind in keiner Weise befriedigend. Crawford²⁹ weist auf mögliche Verbindungen des Münzmeisters mit *negotiatores* aus der *gens Cossutia* hin, die im Osten ihrer Tätigkeit nachgingen, und hält es für möglich, daß L. Cossutius selbst mit dem griechischen Osten in Berührung gekommen war und so die Bilder des Denars aus dem Bereich der griechischen Mythologie zu erklären seien.

Wiseman³⁰ vermutet in Bellerophon entweder den Ahnherren der *gens Cossutia* oder aber den Gründungsvater der Heimatstadt der *Cossutii*. Belege kann er für seine Vorschläge nicht anführen.

Die folgenden Überlegungen scheinen stichhaltiger. Sowohl Medusa als auch Bellerophon und Pegasus sind genealogisch mit dem Meer verbunden. Die Meeresgötter Phorkys und Keto waren die Eltern der Medusa, Pegasus ging aus der Verbindung von

23 Vgl. B. LEVICK und S. JAMESON, *C. Crepereius Gallus and his gens*, in *JRS*, 54, 1964, S. 100 f.

24 J. HATZFELD, *a. O.*, 31. Vgl. B. LEVICK und S. JAMESON, *a. O.*, S. 101.

25 M.H. CRAWFORD, *a. O.*, I, S. 408: 74 v. Chr.; Ch. HERSH und A. WALKER, *a. O.*, Taf. 2: 72 v. Chr.

26 E. BABELON, *a. O.*, I, S. 437.

27 H.A. GRUEBER, *a. O.*, I, S. 405.

28 Vgl. hier H. ZEHNACKER, *a. O.*, I, S. 480 f., 578. Ausgehend von Babelon und Grueber, zeigt er am Denar des L. Cossutius Sabula, wie sich bei der Interpretation wegen der fehlenden Überlieferung Hypothese an Hypothese reiht und schließlich auf das «altbewährte» Interpretationsschema der Familiengeschichte zurückgegriffen wird.

29 M.H. CRAWFORD, *a. O.*, I, S. 408; II, S. 603 A.2.

30 T.P. WISEMAN, *a. O.*, S. 156.

Poseidon und Medusa hervor, und als Eltern des Bellerophon wurden zunächst Glaukos und Eurymeda genannt, dann aber auch Poseidon und die Meeresgöttin Eurynome. Dies alles deutet bereits auf mögliche Seethematik des Cossutius-Denars hin.

Weiter erzählt der Mythos, daß Bellerophon drei von Iobates, dem König von Lykien, gestellte Aufgaben zu bewältigen hatte. Er kämpfte mit den Solymern, den Amazonen und der Chimäre. Nur bei der Vernichtung der Chimäre war ihm Pegasus behilflich. Die Rs. des Cossutius-Denars spielt also auf diesen Kampf an, auch wenn die Chimäre selbst, vielleicht aus Platzmangel, nicht erscheint.

Zahlreiche Ableitungen des Wortes Chimäre existieren, darunter auch eine rationalistische von einem Seeräuber Chimarrhus, der ein Schiff steuerte, das als Bug- und Heckzier einen Löwen- bzw. Schlangenkopf hatte. Der blutdürstige und Verderben bringende Chimarrhus wurde von Bellerophon und Pegasus vernichtet. Plutarch (*Mor.*, 247 F-248 A) überliefert diese Geschichte, die für die Interpretation des Cossutius-Denars von besonderem Interesse ist.

Genealogie und rationalistische Abteilung legen es also nahe, den Denar des L. Cossutius Sabula in die Reihe der Denare einzugliedern, die sich wegen ihrer Seesymbolik auf die bedrohliche Seeräuberplage der siebziger Jahre beziehen. Die Kräfte von Medusa, Bellerophon und Pegasus wurden sozusagen beschworen, um der Piraterie Herr zu werden.

Der Cossutius-Denar steht für die Siegeshoffnungen des römischen Volkes gegen die Piraten allgemein. Daneben könnte aber auch bei ihm eine auf die eigene *gens* bezogene Motivation bestanden haben, die den Münzmeister veranlaßten, Bilder aus der griechischen Mythologie für seinen Denartyp auszuwählen. Im Osten, besonders in der Ägäis (Delos³¹, Ios, Teos, Kos) sind zahlreiche *Cossutii* nachzuweisen, die dort ihren Handelsgeschäften nachgingen. Es dürfte also im Interesse der gesamte *gens Cossutia* gelegen haben, die Seeräuberplage schnellstmöglich zu beseitigen und die Seehandelswege wieder sicher zu machen.

Zum Schluß sei noch die Rs. des dritten Denars des C. Egnatius Maximus (C. 391/3)³² genannt. Sie ist in ihrer Gesamtheit noch ungeklärt. Die beiden stehenden Figuren dürften mit der Benennung Roma und Venus (mit Cupido auf der Schulter) gesichert sein. Den beiden Proren rechts und links, auf denen jeweils ein Steuerruder steht, maß Grueber³³ die Bedeutung eines unbestimmten Seesieges zu. Doch auch in diesem Egnatius-Denar liegt wohl eine Anspielung auf die schwere Seeräuberplage vor. Die Beutestücke Prora und Steuerruder auf dem Egnatius-Denar stehen für einen in den siebziger Jahren erhofften Seesieg gegen die Seeräuber, als mehrere Unternehmungen, wenn auch zunächst ohne durchschlagenden Erfolg gegen die Piraterie gestartet wurden. C. Egnatius Maximus fordert mit seinem Denartyp die Seeherrschaft für Rom (Roma) und das römische Volk (Venus mit Cupido).

Dabei ist wiederum darauf hinzuweisen, daß auch Mitglieder der *gens Egnatia* auf Delos als *negotiatores* tätig waren³⁴. Die Auswahl der Seesymbolik und die damit verbundene Forderung nach der Seeherrschaft, sprich sicheren Seehandelswegen, könnten also unter einem familiären Gesichtspunkt getroffen worden sein.

Zusammenfassend läßt sich folgendes festhalten: Ein bisher unerkanntes Phänomen ist die Häufung von Seethematik auf republikanischen Denaren seit Mitte der

³¹ Vgl. J. HATZFELD, *a. O.*, S. 30 und E. RAWSON, *Architecture and Sculpture: The Activities of the Cossutii*, in *Papers of the British School at Rome*, 43, 1975, (S. 36-47), S. 38.

³² M.H. CRAWFORD, *a. O.*, I, S. 405: 75 v. Chr.; Ch. HERSH und A. WALKER, *a. O.*, Taf. 2: 76 v. Chr.

³³ H.A. GRUEBER, *a. O.*, I, S. 400.

³⁴ Vgl. J. HATZFELD, *a. O.*, S. 33 f.

siebziger Jahre. Auch wenn sie auf verschiedene Weise dargeboten wurde, Cupido auf Delphin (C. 390/2), Roma und Venus zwischen zwei Steuerrudern auf Proren (C. 391/3), Steuerruder (C. 393/1), Medusa und Bellerophon auf Pegasus (C. 395/1) und Neptun in Seepferde-Biga (C. 399/1), beziehen sie sich alle mit großer Sicherheit auf die schwere Seeräuberplage dieser Jahre, die erst mit dem Sieg des Pompeius über die Piraten im Jahre 67 ihr Ende fand. All diese Denartypen drücken die Siegeshoffnungen der römischen Bevölkerung aus, wurden doch die Seeräuber allgemein als starke Belastung empfunden. Sie waren mit Sertorius und Mithradates verbündet, und die Piraterie führte sogar in der Hauptstadt zu Hungersnöten. Die Seeräuber machten nicht nur die Küsten des Mittelmeeres, sondern auch die Seehandelswege unsicher. Darin liegt der Schlüssel zur Interpretation der Denare mit Seeräuberthematik, deren Gestaltung familiär motiviert gewesen zu sein scheint; denn Angehörige der Münzmeister aus den Familien der *Lucretii*, *Egnatii*, *Cossutii*, *Crepereii* können als *negotiatores* in der Ägäis, besonders auf Delos, nachgewiesen werden. Gerade die Händler waren von der Seeräuberplage besonders schwer betroffen.

The Non-Random Character of Various Collections of Crepusius Denarii

Giles F. CARTER*

An important question in die studies of a large issue is whether the sample of coins being studied is random. Large, individual collections of coins from a given issue are likely to be non-random with respect to the dies from which the coins were struck for either of the following reasons: (1) the collection was assembled with diversity of dies as an important criterion, or (2) the collection was assembled with quantity of coins (i.e. low cost) as the primary criterion. If diversity of dies were important, then the collection is non-random in that too many different dies are represented relative to the number of coins in the study. If maximizing the number of coins (low cost) were the controlling factor, then too few dies would likely be represented in the collection relative to the number of coins; this results from the fact that discriminating collectors, either individuals or museum curators, have collected rare coins struck from short-lived dies, leaving the more common coins for all other collectors. Also in the latter stage of their existence, long-lived dies probably produced coins with inferior condition resulting in coins having a relatively low cost.

The Roman Republican denarii of P. Crepusius, struck in 82 B.C., are extremely important because the numbers of obverse and reverse dies and their chronology are known with good precision. Each reverse die was uniquely identified by a Roman numeral, ranging from 1 to 519, and each obverse die was uniquely identified by a combination of a group symbol, such as an ear or crescent, and a letter of the Roman alphabet. Hersh arranged the obverse groups in chronological order by looking at the corresponding reverse die numbers¹. Buttrey determined that two groups of obverse dies were short: they contained far fewer than the normal 21 dies per group². Carter found that occasionally two dies had the same reverse die number and that a few reverse die numbers apparently were accidentally omitted³. Also several pairs of obverse dies had the same letter and group. The best estimate for the number of obverse dies is 470 ± 10 , and the number of reverse dies was most likely 515 ± 10 .

Carter⁴ and others have devised methods to calculate the original number of dies from die statistics for a given issue. It is possible to calculate the original number of dies, D , from die statistics obtained from coins in an individual collection, or from a group of collections of Crepusius denarii. By comparing the calculated original number of dies, D , with the highly reliable numbers given above, one may determine whether the sample of coins in a given collection or a group of collections is random with respect to the dies from which the coins were struck. If a numismatist cannot rely on one collection only, regardless of size, to be random, then how many large collections need be studied to obtain a random sample of coins? Must every last coin be studied in order to obtain a random sample?

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¹ C.A. HERSH, *Sequence Marks on Denarii of Publius Crepusius*, in *NC*, s. 6, 12, 1952, p. 22-66.

² T.V. BUTTREY, *The Denarii of P. Crepusius and Roman Republican Mint Organization*, in *ANSMN*, 21, 1976, p. 67-108.

³ G.F. CARTER, *Die-Link Statistics for Crepusius Denarii and Calculations of the Total Number of Dies*, in *PACT 5. Statistics and Numismatics. Statistique et numismatique. Table ronde organisée par le Centre de Mathématique Sociale de l'École des Hautes Études en Sciences Sociales de Paris et le Séminaire de numismatique M. Hoc de l'Université catholique de Louvain, Paris, 17-19 septembre 1979*, édité par Ch. CARCASSONNE et T. HACKENS, 1981, p. 193-203.

⁴ G.F. CARTER, *A Simplified Method for Calculating the Original Number of Dies from Die Link Statistics*, in *ANSMN*, 28, 1983, p. 195-206.

Calculation of the original number of dies, D

The equation given by Carter⁵ is used here to calculate the original number of dies, D, from the die statistics obtained either from one individual collection or from the combination of two or three collections. The equation is as follows :

$$(1) \quad D = n \cdot d / (1.214n - 1.197d) \quad \text{used in the range } n < 2d,$$

where D is the original number of dies, n is the number of coins in the collection or collections, and d is the number of different dies represented in the collection(s). Slightly different equations are used when $n > 2d$.

Carter's equations slightly underestimate the number of obverse dies when all the *Crepusius* collections are used. Nevertheless, a comparison of the calculated D for obverse dies from one or from several collections of *Crepusius denarii* with the probable value of 470 is an excellent indicator whether the collection or collections are random. If the value for the calculated original number of obverse dies is greater than 500 or less than 440, then the sample of coins is considered to be non-random.

Carter⁶ empirically developed an equation to calculate the standard deviation of D, the calculated original number of dies :

$$(2) \quad s = \frac{D \sqrt{D}}{n-1}$$

where s is the standard deviation of D, D is the calculated number of original dies, and n is the number of coins in the study. This calculation enables one to estimate the probable range for the original number of dies. In a given study one should include enough coins, n, to cause the standard deviation to have an acceptably low value. For example, 500 ± 200 dies usually would not be a useful result, whereas 500 ± 30 dies would usually be adequately precise.

All calculations were made using a computer and several powerful programs : (1) «Microsoft Word» was used to store the information for each coin with respect to dies, the collection or source of each coin, the engravers, etc.; (2) «SPSS-PC» was used to retrieve the needed information on die statistics and to list the die statistics for each collection by itself or for a given combination of collections; (3) «Excel» was used to calculate the original number of dies, D, for each collection or combination of collections; also «Excel» was used to prepare tables and graphs of the resulting calculations of D. The vast amount of sorting of data and calculations would have been extremely time consuming without the use of a computer. An IBM PS-2 home computer with a Hewlett Packard Deskjet Plus printer were used.

Calculated D for one or two collections

Nine major collections, each containing at least 50 *Crepusius denarii*, were chosen for study. The die statistics were obtained for each collection by computer. Figure 1 (obverse dies only) and Table I summarize the results of the calculations of D for each collection; also the number of coins and the known numbers of obverse dies, reverse dies, and die combinations in each of the nine collections are given in Table I. It is obvious that some collections are extremely non-random, especially collection D, which is a private collection, and collection I. The calculated numbers of obverse and reverse dies far exceed the highly probable numbers of 470 obverse dies and 515 reverse dies. Collection I was omitted from Figure 1 because it was extremely non-random and would have made the rest of the graph difficult to interpret due to the compressed scale for the y-

⁵ *Ibidem.*

⁶ *Ibidem.*

axis.

Surprisingly collections C, E, and F are non-random in that the dies are *not* as diverse as expected in a random sample. These collections probably were assembled from purchases of less expensive coins and after rarer coins had been skimmed out of the available pool of Crepusius coins by collectors seeking diversity. As more Crepusius denarii are discovered, one would expect rare coins struck from dies that are unrepresented now to turn up occasionally.

The reverse dies represented by coins in most of the nine individual collections are far from being random (refer to Table I). Only two of the nine collections appear random. Collection G, which is the most random sample of both obverse and reverse dies, was assembled primarily from several large hoards and collections.

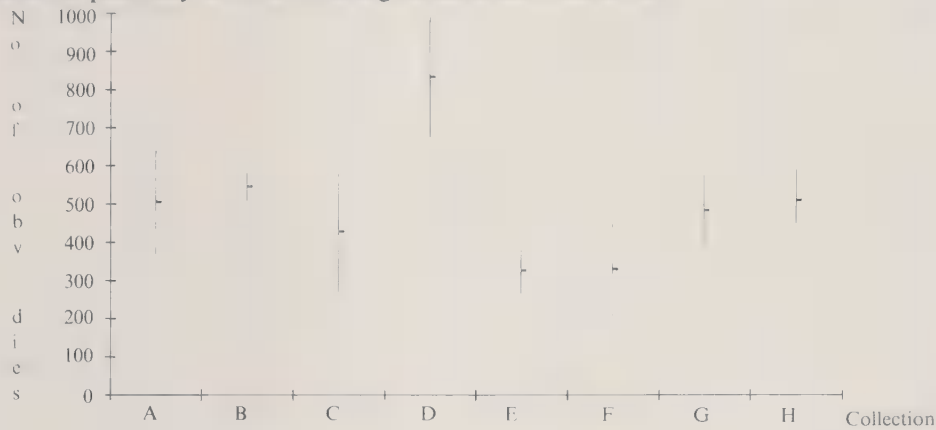


Fig. 1. Calculated original number of obverse dies vs. collection⁷.

TABLE I. CALCULATIONS OF ORIGINAL NUMBERS OF DIES FOR INDIVIDUAL COLLECTIONS.

| Collection | n | d-obv | d-rev | d-dc | D-obv | D-rev | D-dc |
|----------------|-----|-------|-------|------|-------|-------|------|
| A | 83 | 74 | 77 | 80 | 504 | 744 | 1327 |
| B | 332 | 223 | 229 | 283 | 544 | 590 | 1461 |
| C | 57 | 52 | 55 | 56 | 426 | 932 | 1474 |
| D | 151 | 133 | 140 | 151 | 833 | 1344 | * |
| E | 67 | 58 | 61 | 62 | 326 | 491 | 583 |
| F | 50 | 45 | 46 | 46 | 329 | 408 | 408 |
| G | 109 | 93 | 93 | 98 | 483 | 483 | 711 |
| H | 132 | 110 | 110 | 119 | 508 | 508 | 882 |
| I | 72 | 70 | 67 | 72 | 1393 | 669 | * |
| Average | | | | | | 668 | 771 |
| Accepted value | | | | | | 470 | 515 |

* Indeterminate

Note : n = number of coins in a given collection
d-obv = number of different obverse dies represented in a given collection
d-rev = number of different reverse dies represented in a given collection
d-dc = number of different die combinations represented in a given collection
D-obv = calculated original number of obverse dies.

Assuming that other issues of ancient coins are similar to the Crepusius in their distribution, it is obvious that numismatists cannot rely on single collections to provide a random sample of dies, regardless of the size of the collection. Figure 1 presents the calculated values for $D \pm s$, where s is the standard deviation, for the obverse dies in each collection. Only one collection, however, contains enough coins for an acceptably precise calculation of D according to equation (2). The next question is whether combining two large collections will reliably give a random sample of coins and dies.

When all the possible combinations of two collections were studied, the results for

⁷ The vertical lines represent the range of $D+s$ to $D-s$ as calculated by equation (2).

calculated D, given in Table II and Figure 2, show that the combinations of two collections also are not reliably random. Two combined collections, however, are much closer to being random than single collections. This is true, surprisingly, even for combinations involving highly non-random collections: refer to the combinations of collections DA, DB, DC, etc., and to IA, IB, IC, etc. in Table II and to Figure 2. This simply means that when several individuals or museums are collecting with diversity as their main criterion, they frequently collect different rare coins from each other, but usually have coins struck from the same most common dies. In conclusion, numismatists should not rely on only two collections, regardless of size, to obtain a random sample of coins and dies for a given issue.

TABLE II. CALCULATIONS OF ORIGINAL NUMBERS OF DIES FOR TWO COLLECTIONS.

| Collection | n | d-obv | d-rev | d-dc | D-obv | D-rev | D-dc |
|------------|-----|-------|-------|------|-------|-------|------|
| AB | 415 | 246 | 256 | 325 | 488 | 538 | 1175 |
| AC | 140 | 114 | 117 | 127 | 476 | 548 | 991 |
| AD | 234 | 167 | 174 | 197 | 464 | 537 | 955 |
| AE | 150 | 114 | 120 | 131 | 375 | 468 | 777 |
| AF | 133 | 111 | 119 | 124 | 516 | 832 | 1265 |
| AG | 192 | 150 | 153 | 170 | 538 | 588 | 1103 |
| AH | 215 | 155 | 164 | 184 | 442 | 545 | 971 |
| AI | 155 | 131 | 131 | 143 | 647 | 647 | 1304 |
| Average | | | | | 493 | 588 | 1068 |
| BA | 415 | 246 | 256 | 325 | 488 | 538 | 1175 |
| BC | 389 | 236 | 251 | 315 | 484 | 568 | 1287 |
| BD | 483 | 264 | 284 | 372 | 472 | 557 | 1274 |
| BE | 399 | 241 | 253 | 319 | 491 | 556 | 1241 |
| BF | 382 | 239 | 245 | 307 | 514 | 549 | 1218 |
| BG | 441 | 266 | 266 | 344 | 541 | 541 | 1227 |
| BH | 464 | 262 | 271 | 351 | 487 | 526 | 1138 |
| BI | 404 | 242 | 252 | 320 | 487 | 539 | 1204 |
| Average | | | | | 495 | 547 | 1220 |
| CA | 140 | 114 | 117 | 127 | 476 | 548 | 991 |
| CB | 389 | 236 | 251 | 315 | 484 | 568 | 1287 |
| CD | 208 | 166 | 173 | 195 | 642 | 792 | 2124 |
| CE | 124 | 105 | 104 | 115 | 524 | 495 | 1107 |
| CF | 107 | 89 | 92 | 97 | 408 | 498 | 753 |
| CG | 166 | 135 | 137 | 149 | 561 | 606 | 1067 |
| CH | 189 | 140 | 142 | 160 | 428 | 451 | 797 |
| CI | 129 | 107 | 109 | 117 | 484 | 538 | 912 |
| Average | | | | | 501 | 562 | 1130 |
| DA | 234 | 167 | 174 | 197 | 464 | 537 | 955 |
| DB | 483 | 264 | 284 | 372 | 472 | 557 | 1274 |
| DC | 208 | 166 | 173 | 195 | 642 | 792 | 2124 |
| DE | 218 | 167 | 165 | 194 | 562 | 536 | 1304 |
| DF | 201 | 161 | 173 | 190 | 631 | 942 | 2303 |
| DG | 260 | 196 | 200 | 233 | 629 | 682 | 1649 |
| DH | 283 | 194 | 202 | 202 | 493 | 562 | 562 |
| DI | 223 | 169 | 183 | 208 | 551 | 790 | 2133 |
| Average | | | | | 555 | 675 | 1538 |
| EA | 150 | 114 | 120 | 131 | 375 | 468 | 777 |
| EB | 399 | 241 | 253 | 319 | 491 | 556 | 1241 |
| EC | 124 | 105 | 104 | 115 | 524 | 495 | 1107 |
| ED | 218 | 167 | 165 | 194 | 562 | 536 | 1304 |
| EF | 117 | 97 | 97 | 104 | 438 | 438 | 693 |
| EG | 176 | 132 | 138 | 151 | 417 | 501 | 807 |
| EH | 199 | 149 | 154 | 169 | 469 | 535 | 856 |
| EI | 139 | 115 | 115 | 126 | 514 | 514 | 977 |
| Average | | | | | 175 | 194 | 330 |
| FA | 133 | 111 | 119 | 124 | 516 | 832 | 1265 |
| FB | 382 | 239 | 245 | 307 | 514 | 549 | 1218 |
| FC | 107 | 89 | 92 | 97 | 408 | 498 | 753 |
| FD | 201 | 161 | 173 | 190 | 631 | 942 | 2303 |
| FE | 117 | 97 | 97 | 104 | 438 | 438 | 693 |
| FG | 159 | 123 | 127 | 136 | 427 | 492 | 715 |
| FH | 182 | 138 | 142 | 156 | 450 | 507 | 830 |
| FI | 122 | 109 | 103 | 112 | 754 | 506 | 973 |
| Average | | | | | 517 | 595 | 1094 |

| Collection | n | d-obv | d-rev | d-dc | D-obv | D-rev | D-dc |
|------------|-----|-------|-------|------|-------|-------|------|
| GA | 192 | 150 | 153 | 170 | 538 | 588 | 1103 |
| GB | 441 | 266 | 266 | 344 | 541 | 541 | 1227 |
| GC | 166 | 135 | 137 | 149 | 561 | 606 | 1067 |
| GD | 260 | 196 | 200 | 233 | 629 | 682 | 1649 |
| GE | 176 | 132 | 138 | 151 | 417 | 501 | 807 |
| GF | 159 | 123 | 127 | 136 | 427 | 492 | 715 |
| GH | 241 | 170 | 167 | 195 | 460 | 434 | 794 |
| GI | 181 | 148 | 142 | 160 | 629 | 517 | 1026 |
| Average | | | | | 525 | 545 | 1049 |
| HA | 215 | 155 | 164 | 184 | 442 | 545 | 971 |
| HB | 464 | 262 | 271 | 351 | 487 | 526 | 1138 |
| HC | 189 | 140 | 142 | 160 | 428 | 451 | 797 |
| HD | 283 | 194 | 202 | 202 | 493 | 562 | 562 |
| HE | 199 | 149 | 154 | 169 | 469 | 535 | 856 |
| HF | 182 | 138 | 142 | 156 | 450 | 507 | 830 |
| HG | 241 | 170 | 167 | 195 | 460 | 434 | 794 |
| HI | 204 | 157 | 151 | 172 | 536 | 460 | 840 |
| Average | | | | | 471 | 503 | 848 |
| IA | 155 | 131 | 131 | 143 | 647 | 647 | 1304 |
| IB | 404 | 242 | 252 | 320 | 487 | 539 | 1204 |
| IC | 129 | 107 | 109 | 117 | 484 | 538 | 912 |
| ID | 223 | 169 | 183 | 208 | 551 | 790 | 2133 |
| IE | 139 | 115 | 115 | 126 | 514 | 514 | 977 |
| IF | 122 | 109 | 103 | 112 | 754 | 506 | 973 |
| IG | 181 | 148 | 142 | 160 | 629 | 517 | 1026 |
| IH | 204 | 157 | 151 | 172 | 536 | 460 | 840 |
| Average | | | | | 575 | 564 | 1171 |



Fig. 2a. Calculations of original numbers of obverse dies for combinations of two collections.



Fig. 2b. Calculations of original numbers of obverse dies for combinations of two collections⁸.

8 The vertical lines represent the range of D+s to D-s as calculated by equation (2). The letter X

TABLE III. CALCULATIONS OF ORIGINAL NUMBERS OF DIES FOR COMBINATIONS OF THREE COLLECTIONS

| Collection | n | d-obv | d-rev | d-dc | D-obv | D-rev | D-dc |
|------------|-----|-------|-------|------|-------|-------|------|
| ABC | 472 | 259 | 278 | 353 | 465 | 546 | 1107 |
| ABD | 566 | 280 | 299 | 398 | 450 | 514 | 1069 |
| ABE | 482 | 259 | 273 | 355 | 454 | 509 | 1068 |
| ABF | 465 | 260 | 271 | 347 | 477 | 525 | 1082 |
| ABG | 524 | 282 | 282 | 387 | 495 | 495 | 1173 |
| ABH | 547 | 280 | 293 | 387 | 466 | 511 | 1054 |
| ACD | 291 | 195 | 201 | 237 | 473 | 519 | 991 |
| ACE | 207 | 151 | 155 | 178 | 443 | 488 | 964 |
| ACF | 190 | 142 | 151 | 166 | 445 | 575 | 987 |
| ACG | 249 | 183 | 185 | 214 | 547 | 570 | 1155 |
| ACH | 272 | 178 | 171 | 218 | 413 | 371 | 856 |
| ADE | 301 | 194 | 193 | 235 | 438 | 432 | 841 |
| ADF | 284 | 193 | 204 | 235 | 482 | 576 | 1051 |
| ADG | 343 | 227 | 228 | 277 | 538 | 545 | 1120 |
| ADH | 366 | 221 | 230 | 279 | 450 | 498 | 925 |
| AEF | 200 | 146 | 153 | 172 | 429 | 513 | 932 |
| AEH | 259 | 178 | 185 | 213 | 455 | 515 | 928 |
| AEH | 282 | 184 | 196 | 226 | 425 | 513 | 887 |
| AFG | 242 | 174 | 184 | 206 | 492 | 605 | 1056 |
| AFH | 265 | 180 | 201 | 220 | 449 | 657 | 999 |
| AGH | 324 | 207 | 212 | 255 | 461 | 492 | 938 |
| BCD | 540 | 271 | 295 | 393 | 442 | 527 | 1146 |
| BCE | 456 | 254 | 268 | 344 | 464 | 525 | 1106 |
| BCF | 439 | 251 | 263 | 332 | 474 | 529 | 1075 |
| BCG | 498 | 277 | 283 | 370 | 505 | 530 | 1140 |
| BCH | 521 | 271 | 286 | 372 | 458 | 514 | 1035 |
| BDE | 550 | 279 | 292 | 395 | 460 | 505 | 1115 |
| BDF | 533 | 275 | 294 | 390 | 461 | 531 | 1153 |
| BDG | 592 | 300 | 308 | 426 | 494 | 521 | 1208 |
| BDH | 615 | 291 | 312 | 424 | 449 | 514 | 1091 |
| BEF | 449 | 253 | 261 | 335 | 469 | 504 | 1044 |
| BEG | 508 | 276 | 284 | 371 | 490 | 521 | 1092 |
| BEH | 531 | 273 | 286 | 376 | 456 | 502 | 1026 |
| BFG | 491 | 276 | 279 | 363 | 510 | 523 | 1103 |
| BFH | 514 | 272 | 282 | 369 | 469 | 506 | 1040 |
| BGH | 573 | 294 | 297 | 403 | 490 | 500 | 1083 |
| CDE | 275 | 196 | 194 | 237 | 543 | 525 | 1299 |
| CDF | 258 | 188 | 198 | 229 | 550 | 670 | 1511 |
| CDG | 317 | 222 | 224 | 274 | 591 | 608 | 1528 |
| CDH | 340 | 212 | 220 | 273 | 453 | 501 | 1080 |
| CEF | 174 | 136 | 133 | 152 | 488 | 445 | 903 |
| CEG | 233 | 170 | 171 | 200 | 499 | 510 | 1072 |
| CEH | 256 | 176 | 179 | 208 | 450 | 475 | 862 |
| CFG | 216 | 160 | 161 | 182 | 489 | 500 | 886 |
| CFH | 239 | 163 | 169 | 194 | 410 | 460 | 800 |
| CGH | 298 | 194 | 193 | 234 | 446 | 440 | 854 |
| DEF | 268 | 192 | 193 | 230 | 539 | 548 | 1232 |
| DEG | 327 | 221 | 219 | 273 | 546 | 531 | 1272 |
| DEH | 350 | 219 | 221 | 275 | 471 | 482 | 1005 |
| DFG | 310 | 218 | 227 | 267 | 586 | 673 | 1459 |
| DFH | 333 | 213 | 227 | 272 | 475 | 570 | 1151 |
| DGH | 392 | 241 | 243 | 307 | 504 | 515 | 1110 |
| EFG | 226 | 160 | 164 | 187 | 436 | 475 | 836 |
| EFH | 249 | 174 | 181 | 205 | 461 | 526 | 897 |
| EGH | 308 | 199 | 200 | 239 | 452 | 458 | 838 |
| FGH | 291 | 191 | 193 | 151 | 446 | 459 | 255 |

Calculated D from combinations of three large collections

Die statistics for all the various combinations of three collections were obtained for collections A through H. The calculated results for D are given in Table III. Note that the coin samples are satisfactorily random for essentially all of the combinations involving

represents a second collection e.g., E-A, E-B, E-C, E-D, E-F, E-G, E-H, E-I.

three large museum collections. Many combinations of three smaller collections are not yet satisfactorily random. Even the combinations of three of the largest collections, defined as containing a total of more than 350 coins, are not quite as random as using all coins from every source possible. Because the calculations of D , the original number of dies, is not perfectly reliable, in general there is *not* an important difference in the values calculated for D whether one chooses three large collections to study or every last coin from all possible sources. Samples of 350 or more coins from four or five smaller collections should also be reliably random.

It is likely that the original distribution of coins from various dies was non-random : i.e. the total output from a given die or from several dies may have been sent to one remote locale. If a very large hoard were assembled from that region and if the hoard contains many coins from the same issue, the hoard would be extremely non-random, and this could make all other samples of this issue somewhat non-random. Hopefully, this situation is uncommon. Even though individual hoards are likely to be non-random, just as individual collections are non-random, coins from many hoards will usually tend to approach a random representation of the original dies.

Conclusion

Eight out of nine large, individual collections of Crepusius coins proved to be non-random with respect to the dies represented. Combinations of three of the largest collections gave samples of coins and dies that were essentially random. It is unnecessary to study all collections of Crepusius coins to obtain an essentially random sample. Other issues of ancient coins usually should follow the same principles.

Acknowledgement

I appreciate the suggestion from Warren Esty that my preliminary calculations should be refined and published.

Die Sphinx - das Wappentier der Sibylle ?

Stephanie BÖHM*

Unter den im Jahr 46 v. Chr. in Rom geprägten Münzen des Münzmeisters T. Carisius befindet sich ein Denar¹, dem eine Schlüsselfunktion in der Erforschung der spätrepublikanischen und augusteischen Bildsprache zukommt.

Die Deutung der beiden Münzbilder als Kopf der Sibylle auf der Vorderseite (Abb. 1) und die der Sphinx als ihr Wappentier auf der Rückseite (Abb. 2) bildet bis heute die Grundlage für die Interpretation augusteischer Sphingendarstellungen und für deren Bezeichnung als «sibyllinische Rätselwesen» oder als «Symbol» der Sibylle. Augusteische Sphingen und ihr «sibyllinischer Charakter» fanden Aufnahme in Handbücher und Lexika.

Während die RS des Denares eine im Profil nach r. sitzende Sphinx wiedergibt mit hoch aufgerichteten Flügeln, zeigt die VS einen weiblichen Idealkopf im Profil nach r. Das Haar ist mit einer Tanie hochgebunden, deren eines Ende als Zipfel direkt über der Stirn liegt und über den Scheitel gerade zum Hinterkopf geführt wird. Hier wird die Tanie unter dem Haarschopf im Nacken herumgelegt und in 3-facher Windung um den Kopf geführt. Zwischen den einzelnen Taniwindungen quellen dicke Locken hervor, so auch vor dem Ohr, während die Stirn frei bleibt und nur einen schmalen Streifen bildet zwischen Tanie und Augenbrauen.

Die in den Münzcorpora übliche Deutung für dieses Münzbild lautet «Kopf der Sibylle» und findet sich bereits in der 1857 erschienen *Description générale* von H. Cohen².

Basis dieser Sibylle-Interpretation bilden Silber- und Bronzemünzen aus Gergis in der Troas (Abb. 3-6), die ebenfalls die Kombination Frauenkopf + Sphinx wiedergeben und von der 1. Hälfte des 4. Jhs. bis in die Mitte des 3. Jhs. v. Chr. laufen³. Sie zeigen auf der VS einen weiblichen Kopf in Frontal- bzw. 3/4 Ansicht mit einem Kranz im üppigen Haar und einer Halskette. Da diese Münzen keine Beschrift tragen, ist ihre Deutung zunächst offen.

In der Literatur tragen sie die Bezeichnung «Sibyllē von Gergis». Diese Benennung beruht auf einer bei Stephanos v. Byzanz überlieferten Nachricht des Phlegon von Tralleis, eines Freigelassenen Hadrians, der in griechischer Sprache eine Geschichtsschreibung verfaßte⁴. Hier ist die Rede von «Γεργυθία», der weissagenden

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¹ M.C. CRAWFORD, *Roman Republican Coinage*, Cambridge, 1974, 464/1, Taf. 54, 25 (= CRAWFORD, RRC).

² H. COHEN, *Description générale des monnaies de la République romaine*, Paris, 1857, S. 77, n°8, Taf. 10, 8; H.A. GRUEBER, *Coins of the Roman Republic in the British Museum*, I, London, 1970, S. 529, n°4060 ff; E.A. SYDENHAM, *The Coinage of the Roman Republic*, London, 1952, n°983; G. BELLONI, *Musei e Gallerie di Milano. Gabinetto Numismatico*, I, Milano, 1977, n°278.

³ E. BABELON, *Traité des monnaies grecques et romaines*, II, 2, Paris, 1910, S. 1299; *BMC, Greek Coins. Troas, Aeolis and Lesbos*, S. 55, n°1-9, Taf. 12-15; *SNG von Autlock*, 5, Taf. 47, 1513-1516.

⁴ RZACH, s.v. *Sibyllen*, in *RE*, II, 2, 1923, 2, Reihe 20834 f.

Sibylle von Gergis. «Sie und die Sphinx sind auf dem Geld der Gergiten dargestellt»⁵. Diese Überlieferung sah man sodann auf den Münzen von Gergis bestätigt.

Daran schließt sich nun die Deutung des republikanischen Denars an. Als weitere Folge wird diese Sibylle-Interpretation auf einen Denar des L. Valerius Acisculus übertragen, der im Jahr 45 v. Chr., d.h. 1 Jahr nach Carisius, prägt und denselben Kopf als RS-Bild verwendet⁶. Andersartige Deutungsvorschläge werden damit abgewiesen, daß es sich auch hier um eine Sibylle handeln müsse. Eine Beobachtung, die natürlich vom ikonographischen Standpunkt aus nur konsequent ist⁷.

Bedenken gegen die Interpretation des Frauenkopfes als «Sibylle» wurden schon früh von E. Babelon geäußert⁸. Er fand diese Benennung sehr unbefriedigend, da der Kopf doch überhaupt keine Ähnlichkeit habe mit dem 20 Jahre älteren Sibyllekopf auf einem Denar des L. Manlius Torquatus (Abb. 7, 8) aus dem Jahr 65 v. Chr.⁹ Die Benennung ist hier durch die Beischrift SIBYLLA gesichert. *Faute de mieux* behält aber auch Babelon die Bezeichnung Sibylle für den Frauenkopf des Carisius-Denars bei. Die Sphinx auf der Rückseite könne als Symbol für die Zweideutigkeit der prophetischen Worte der Sibylle stehen.

Mit dieser einmal fixierten Münzbildkombination «Sibylle + Sphinx» setzte eine Entwicklung ein, die bei späteren Erwähnungen des Carisius-Denars die Sphinx zum «Wappentier» der Sibylle machte¹⁰.

Dieses anscheinend zum Axiom erhobene Begriffspaar «Sibylle + Sphinx» = Sibylle und ihr Wappentier hatte aber auch Konsequenzen für die Interpretation der augusteischen Bildsprache. Am deutlichsten wird dies dort, wo das Bild der Sphinx an Monumenten staatspolitischer Bedeutung auftritt. Greifen wir eines der wohl wichtigsten Zeugnisse augusteischer Bildkunst heraus, die Statue des Augustus von Prima porta. Neuesten Publikationen zufolge «tragen die beiden Schulterklappen des Panzers in heraldischer Verdoppelung das sibyllinische Rätselwesen, die Sphinx»¹¹. Vergleichbar der Eule der Athena oder dem Adler des Zeus, wird die Sphinx als Attribut der Sibylle aufgefaßt.

Auch bei der Interpretation der Sphinx auf augusteischen Cistophoren taucht der Begriff «Wappentier der Sibylle» auf. Selbst in Formulierungen wie «die Sphinx verheißt ein neues Zeitalter»¹² schwingt die Assoziation Sphinx-Sibylle mit, denn keine andere als Sibylle verkündet diese Heilserwartungen¹³.

Eine ähnliche Bedeutung wird auch dem Sphingenbild zugesprochen, das Octavian als erstes seiner insgesamt 3 Siegelbilder benutzte, bevor er es durch das Bildnis Alexanders und zuletzt durch sein eigenes ersetzte¹⁴. Auch diese Sphinx wird unter Berufung auf die Münzen aus Gergis und den Carisius-Denar zum «sibyllinischen

⁵ FHG, II, B 1162 : Steph. Byz., s. Γέργις πόλις Τροίας ... Γεργιθία ή χρησμολόγος Σίβυλλα, ή τις και έτετύπωτο εν τῷ νομίσματι τῶν Γεργιθίων αυτή τε και σφίξ, ως Φλέγων εν 'Ολυμπίδων α.

⁶ M. CRAWFORD, *RRC*, 474/3, Taf. 56, 6.

⁷ So CRAWFORD, *op. cit.*, in seinem Kommentar zu diesem Denar.

⁸ E. BABELON, *Description historique et chronologique des monnaies de la République romaine*, I, Paris, 1885, S. 312 f.

⁹ M. CRAWFORD, *RRC*, 411/1, Taf. 50, 23.

¹⁰ A. ALFOLDI, *Der neue Weltherrscher der vierten Ekloge Vergils*, in *Hermes*, 65, 1930, S. 370.

¹¹ E. SIMON, *Der Augustus von Prima Porta*, in *Opus Nobile*, 13, 1959, S. 13.

¹² P. ZANKER, *Augustus und die Macht der Bilder*, 2, München, 1990, S. 56, Abb. 36.

¹³ In diesem Sinne auch D. KIENAST, *Augustus : Prinzeps und Monarch*, Darmstadt, 1982, S. 193 mit Anm. 92.

¹⁴ H.-U. INSTINSKY, *Die Siegel des Kaisers Augustus*, Baden-Baden, 1962.

Symbol»¹⁵. «Die Sphinx ist von alters her das sibyllinische Tier»¹⁶. So wird die Siegel-Sphinx noch in der jüngsten Forschung zum «Symbol des von der Sibylle prophezeiten *regnum Apollonis*»¹⁷.

Um über den somit als erwiesen geltenden sibyllinischen Charakter der Sphinx Aufschluß zu gewinnen, sind eine Reihe von Fragen zu beantworten.

Bei der gesamten Argumentation fiel auf, daß zur Interpretation der Sphinx als Attribut der Sibylle nur auf die Münzen aus Gergis verwiesen wurde¹⁸. Über diese Münzen hinaus waren keine weiteren Zeugnisse hinzugekommen, die von anderer Seite her diese Interpretation hätten stützen können. Sollte sich die These von dem Wappentier der Sphinx aufrechterhalten, müßten auch in anderen Gattungen als nur der Münzprägung Beweise dafür zu finden sein, die Sphinx und Sibylle als zusammengehörig erweisen.

Eine Durchsicht der literarischen Quellen zum Thema Sibylle erbringt diesen Beweis nicht¹⁹. So zahlreich die literarischen Nachrichten über weissagende Sibyllen auch sind, es gibt darunter keine Schriftquelle, die es erlaubte, die Sphinx and ihre Seite zu stellen. Anders verhält es sich mit dem Dreifuß, dieser nämlich wird des öfteren im Zusammenhang mit Sibylle erwähnt²⁰. So ist bei Properz (IV, 1, 49) die Rede von dem Dreifuß der Sibylle und Valerius Flaccus (I, 5) spricht von dem Dreifuß der cumäischen Seherin. Ich erinnere in diesem Zusammenhang an den bereits genannten Denar des L. Manlius Torquatus aus dem Jahr 65 v. Chr., der den Dreifuß als RS-Bild mit dem inschriftlich gesicherten Kopf der Sibylle aus der VS kombiniert²¹ (Abb. 7, 8).



So zahlreich die literarischen Erwähnungen der Sibylle sind, so spärlich ist dagegen die archäologische Überlieferung. Faßbar wird Sibylle für uns erst in der augusteischen Basis von Sorrent²². Hier ist die apollinische Kutbildgruppe im neuen Apollontempel auf dem Palatin wiedergegeben mit dem Apollo des Skopas, der Diana des Timotheos und

¹⁵ E. SIMON, *Zur Augustusstatue von Prima Porta*, in *RM*, 64, 1957, S. 61.

¹⁶ O. BRENDDEL, *Novus Mercurius*, in *RM*, 50, 1935, S. 246.

¹⁷ P. ZANKER, *op. cit.*, S. 58.

¹⁸ S.o. Anm. 4.

¹⁹ s. Zusammenstellung bei ROSCHER, *Sibylla*, in *ML*, IV, S. 790 ff; *RE*, II, 2, 1923, S. 2083 ff; K. LATTE, *Römische Religionsgeschichte*, in *HdAlturtumswissenschaft*, V, 4, 1960, S. 160.

²⁰ G. WISSOWA, *Religion und Kultus der Römer*, in *HdAlturtumswissenschaft*, V, 42, 1912, S. 500, Anm. 6.

²¹ S. o. Anm. 9.

²² G.E. RIZZO, *La base di Augusto*, in *BullCom*, 60, 1932, S. 51 ff, Taf. 3; P. ZANKER, *op. cit.*, S. 241, Abb. 186; R.M. SCHNEIDER, *Bunte Barbaren*, Worms, 1986, S. 68, Anm. 404 (gesamte Literatur).

der Leto des jüngeren Kephisodot. In der auf dem Boden sitzenden Frau sieht man Sibylle, die von Weissagung erschöpft zusammengesunken ist. Sie gibt also Hinweis auf die in dem Kultbildsockel aufbewahrten sibyllinischen Bücher.

Als zweites und auch schon letztes Zeugnis der bildlichen Wiedergabe der Sibylle sind kaiserzeitliche Münzen aus dem äolischen Kyme und aus Erythrai zu nennen. Die RS der erythräischen Münzen zeigt die Darstellung einer im Profil nach l. sitzenden Frau in langem Gewand²³. Die Figur wäre schwer zu deuten, stünde nicht am l. Bildrand, also hinter der Sitzenden, die Beischrift CIBYΛΛA.

Die Bronzemünze aus Kyme²⁴, die ebenfalls antoninisch ist, zeigt auf der VS einen weiblichen Kopf nach r. mit lang herabhängenden Haarsträhnen und einer Tanie, auf der RS eine Demeter mit Fackel und Ähren. Zur Lesung der VS zitiere ich Imhoof-Blumer, der l. am Hinterkopf K liest und vor den Kopf ΩΝ ΣΙΒΥΛΛΑ.

Fragt man nun auch hier nach einem Zusammenhang zwischen Sibylle und Sphinx, so kann die bildliche Überlieferung ebensowenig wie die literarische eine positive Antwort geben.

Beleuchtet man in einem weiteren Schritt die Tradition der Sphingendarstellungen auf eine mögliche Verbindung zur Sibylle hin, so sind auch hier keine Anhaltspunkte zu finden, die sie zum sibyllinischen Symbol machten. Weder die thebanische, Rätsel aufgebende Sphinx, die schließlich von Ödipus getötet wird²⁵, noch Spingen in ihrer Schutzfunktion als Grabwächter sind mit Sibylle in Verbindung zu bringen²⁶.

Ebensowenig lassen sich aus den Münzdarstellungen von Spingen Ergebnisse gewinnen, die Sphinx und Sibylle als zusammengehörig erwiesen. Ganz im Gegenteil, die Sphinx als VS oder RS-Bild wird mit den verschiedensten Gegenseiten kombiniert. So z.B. prägt Chios seit dem frühen 6. Jh. v. Chr. die Sphinx auf der VS mit zunächst einem *Quadratum Incusum* als RS-Bild²⁷, das ab 190 v. Chr. dann ersetzt wird durch Amphora und Füllhorn, ein Bild das bis 30 v. Chr. beibehalten wird²⁸.

In Perge erscheinen im 3. Jh. Prägungen, die auf der VS die sitzende Sphinx tragen und auf der RS Artemis mit kurzem Chiton und Fellstiefeln²⁹.

Ebenso prägt Kaunos in der 2. Hälfte des 4. Jhs. Münzen, die einen stoßenden Stier mit einer sitzenden Sphinx verbinden³⁰.

Stellt man nun zu diesen Prägungen die Münzen von Gergis³¹, die ja in denselben geographischen und zeitlichen Rahmen gehören, so ergibt sich, daß Gergis mit seinem

23 F. IMHOOF-BLUMER, *Griechische Münzen*, München, 1890, S. 117, n°295, Taf. 8, 27.

24 ID., *Zur Münzfunde des Pontus, von Paphlagonien, Tenedos, Aiolis und Lesbos*, in *ZfN*, 20, 1897, S. 279, n°32, Taf. 10, 16.

25 H. WALTER, *Sphingen*, in *Antike und Abenland*, 9, 1960, S. 63 ff.

26 Aus der Fülle von Beispielen seien nun genannt G.M.A. RICHTER, *The Archaic Gravestones of Attica*, New York, 1961, S. 6, 15 ff., Abb. 34 ff; G. KOKULA, *Marmorlutrophoren*, in *AM Beih.*, 10, 1984, S. 165 G1; H. LUSCHEY, *Zur Wiederkehr archaischer Bildgedanken in der attischen Grabmalkunst des 4. Jh. v. Chr.*, in *Festschrift B. Schweitzer*, 1954, Taf. 52, 2. Zur Deutung zuletzt E. KIRCHNER, *Zum Bildprogramm Klazomenischer Sarkophage*, in *JdAI*, 102, 1987, S. 148 f.

27 P.R. FRANKE und M. HIRMER, *Die griechische Münze*, 2, München, 1972, Taf. 180, 606 V, 607.

28 *SNV von Aulock*, 6, Taf. 70, 2278-2279 (190-84 v. Chr.), 2280 (84-30 v. Chr.).

29 *Ibidem*, 11, Taf. 151, 4649-4652.

30 *Ibidem*, 7, Taf. 81, 2563-2564.

31 S.o. Anm. 3.

Sphingenbild keine Sonderstellung einnimmt, sondern mit diesem Motiv in guter kleinasiatischer Tradition münzprägender Städte steht.

Was die Deutung der Sphinx als Münzbild betrifft, so ist m.E. hier zuerst an ihre Schutzfunktion zu denken. Wie Sphingen über Gräber und Heiligtümer wachen, so auch über das Wohl einer Stadt. Vergleichbar dem apotropäischen Charakter von Siegel und Amulett einer Privatperson hat die Sphinx auf der Münze Schutzfunktion für das Gemeinwesen³². So verhält es sich auch mit dem Sphingenbild von Gergis. Dies würde auch nicht der eingangs zitierten Aussage Phlegons widersprechen, der lediglich sagt, daß auf den Münzen der Stadt die weissagende Sibylle von Gergis, deren Namen er nicht kennt, denn er nennt sie nur Γεργιθία, und die Sphinx abgebildet sind³³. Somit hat Gergis auf seinen Münzen eine Persönlichkeit von lokaler Bedeutung mit einem üblichen Schutzemblem kombiniert³⁴. Ein innerer Bezug der Sibylle zur Sphinx als ihrem Wappentier läßt sich daraus nicht mehr ableiten.



Abb. 9.



Abb. 10.

Dies hat nun Konsequenzen für die Interpretation des Denars des T. Carisius. Haftete der Zusammenstellung des Denars mit den Gergis-Münzen schon von Anfang an der Charakter des Zufälligen an, so wird dieser Eindruck nur noch erhärtet. Denn ungeachtet der großen zeitlichen und geographischen Differenz der Münzen, zeigen auch die beiden Frauenköpfe typologisch keinerlei Gemeinsamkeiten, die eine Identifizierung des Kopfes auf dem Denar anhand der Gergis-Münzen zuließe. Da sich nun auch kein Beweis fand, der die Verbindung «Frau + Sphinx» automatische zur Sibylle und ihrem

³² Z.B. AGD, I, 3, n°2220 (Onyx mit hockender Sphinx, 1. Jh. v. Chr.).

³³ S.o. Anm. 4.

³⁴ Der Frage, ob es sich bei dem weiblichen Kopf auf der VS überhaupt um die Darstellung der Sibylle von Gergis handelt, wird im Rahmen dieses Vortrages nicht nachgegangen.

Wappentier machte, besteht kein Grund mehr, in dem Frauenkopf auf dem Carisius-Denar eine Darstellung der Sibylle zu sehen.

Wesentlich überzeugender ist es daher, einem bereits von E. Langlotz eingeschlagenen Weg zu folgen und den Kopf als Aphroditebildnis zu deuten³⁵. Das komplizierte Motiv der Haarbinde und der so charakteristisch in die Stirn gezogene Tänzzipfel sind Merkmale, die das Münzbild mit einem hochklassischen Aphroditebild der Zeit um 440/430 v. Chr. verbinden³⁶. Als sicherlich bekanntestes Beispiel für diesen sog. Sappho-Aphrodite-Typus sei die Hermenkopie Neapel genannt (Abb. 9, 10)³⁷. So einig man sich in der Forschung über die stilistische Verwandtschaft des Kopfes mit phidiasischen Werken ist, so uneinig ist man sich über seine genaue Identifizierung³⁸. Zu weit scheint hier jedoch E. Langlotz zu gehen, der das republikanische Münzbild mit dem Sappho-Aphrodite-Kopf zwar in Zusammenhang bringt, diesen aber als klassizistisch bezeichnet und beide für Nachklänge der von Caesar in Auftrag gegebenen Venus Genetrix des Arkesilaos hält³⁹.

Wenn sich die nähere Identifizierung dieses Aphroditekopfes auch unserer Kenntnis entzieht, so muß es sich doch um ein offensichtlich auch in Rom hochberühmtes Bildnis gehandelt haben, das uns immerhin in 18 kaiserzeitlichen Repliken und 8 Varianten vorliegt⁴⁰.

Den Carisius-Denar in diesen Kontext zu setzen, halte ich für die plausibelste Erklärung.

35 E. LANGLOTZ, *Aphrodite in den Gärten*, in *Sitzungsbericht der Heidelberger Akademie der Wissenschaften. Phil.-Hist. Klasse*, 1954, S. 20.

36 V.M. STROCKA, *Aphroditekopf in Brescia*, in *JdAI*, 82, 1967, S. 110 ff.

37 *Ibidem*, S. 113 ff., Abb. 5-8.

38 Eine klare Darlegung der mit diesem Typus verbundenen Problematik findet sich bei C. MADERNA-LAUTER, in *Forschungen zur Villa Albani*, II, 1990, S. 333, n°242 - Kopf der Aphrodite («Sappho» oder «Olympias»). Zum Denar des Carisius S. 336 mit Anm. 16.

39 E. LANGLOTZ, *Zwei römische Terrakotaköpfe*, in *Festschrift B. Schweitzer*, 1954, S. 314 mit Anm. 15, S. 316.

40 Bgl. die Replikenliste bei V.M. STROCKA, *op. cit.*, S. 140 f.

Le monnayage d'Antipolis

Hervé CIRON*

Antipolis, «libérée de la tutelle des Massaliètes» (Strabon, IV, 1, 9) après la chute de la métropole en 49 av. J.-C., devait se doter de *nomisma*. Son monnayage est resté longtemps mal connu, par la dispersion des rares exemplaires entièrement lisibles, d'où quelques divergences de lecture et d'interprétation¹. Un inventaire a permis de reconsidérer la question². Si, en effet, on peut d'une part confirmer une relative immuabilité typologique des motifs figurés et des légendes de revers, il faut désormais constater une profusion de légendes de droit, de sens reconnaissable, ce qui pourra conduire à remettre en cause l'organisation et la durée de l'émission.

Description

Dr. : Tête laurée d'Apollon³ à dr.; devant, un ou plus souvent deux noms abrégés (ponctuation respectée) :

- 13 émissions avec deux noms : ΙΣ.ΔΗΜ; ΕΥ ΙΣ; ΛΑ.ΤΕ; ΛΑ.ΚΑ; ΤΙ.Δ.ΚΟΡ;
ΕΠΙ ΠΑΡ; ΝΙ.ΔΙ; ΔΗ.ΛΙ; ΜΑ.ΔΗ; ΑΝΤ.ΑΝΤ; ΑΠ ΔΚ; ΑΙ.ΜΑ; ΤΕΡ.ΑΙΜ
 - 3 émissions avec un nom : Μ.ΤΕΡ; ΑΝΤΙ; ΚΑΝ
 - 2 indéterminées : -ΜΟ; ΔΟ ----
- Soit 18 différents recensés à ce jour.

Cet ensemble s'inscrit nécessairement dans une durée qui ne peut dépasser un quart de siècle (*infra*). Il est improbable que la règle de représentation sur ces espèces ait pu varier plusieurs fois en cette courte période, alors même que la typologie reste homogène; partant de cette hypothèse, nous voyons que deux de ces abrégés correspondent

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¹ Le type monétaire est traditionnellement reconnu et probablement consigné pour la première fois par H. GOLTZIUS, *Fasti magistratuum et triumphorum romanorum...*, Brugis, 1566, qui crut bon de publier l'ethnique complet sous une forme classique, au génitif, sans doute pour couper court à toute polémique d'attribution; en fait, il était certainement de bonne foi, bien qu'il l'ait «attribué» à Lépide, et aurait vu un exemplaire à légendes ΑΝΤΙΠΛΕΠΙ semi-circulaires et quasi attachées, comme il en existe, et restituant un tau pour le pi. J. ARAZI, *Antiquités historiques de la ville d'Antibes*, Antibes, 1708, soucieux de confirmer cette attribution, ne manque pas de citer cette pseudo-légende. Une description numismatique apparaît dans J. PELERIN, *Recueil des médailles des peuples et des villes qui n'ont point été publiées ou qui sont peu connues*, Paris, 1763, avec parfois des erreurs d'interprétation de l'effigie de droit, puisque la tresse temporelle d'Apollon est prise pour la bordure d'un casque. Enfin, J. ECKHEL, *Doctrina nummorum veterum*, Vindobonae, 1792, et *Catalogum musei Cesari Vindobonensis*, I. *Nummorum Veterum*, Vindobonae, 1779. Une première idée de la variété de ces monnaies apparaît dans T.E. MIONNET, *Description des médailles antiques grecques et romaines*, Paris, 1806-1837, et J. LELEWEL, *Études numismatiques et archéologiques*, I. *Type gaulois ou celtique*, Bruxelles, 1841, interprète déjà certains abrégés du droit comme des noms de personnes, romains. Par la suite, des interprétations «globales» des légendes, droits et revers mêlés, seront proposées en concurrence avec des noms de personnes : L. DE LA SAUSSAYE, *Numismatique de la Gaule Narbonnaise*, Paris, 1842; A. BLANCHET, *Traité des monnaies gauloises*, Paris, 1905; R.G. VARALDI, *À propos d'Antibes et de ses monnaies*, dans *Annales de la société scientifique et littéraire de Cannes*, 8, 1937-1938, p. 139-148; B. HEAD, *Historia Nummorum*, Londres, 1963 (rééd.); M. GRANT, *From imperium to auctoritas*, Cambridge, 1969 (rééd.). La recension de ces dernières lignes est contenue dans la dernière publication concernant ce sujet et sur laquelle nous nous appuyons : G. ROGERS, *Notes sur des rapports métrologiques : un système monétaire en Gaule de 43 à 23 a.C.*, dans *RN*, s. 6, 28, 1986, p. 83-93.

² Dans le cadre d'un mémoire de DEA de l'Université de Nice, 1988.

³ Nous avons abordé cette détermination, H. CIRON, *Une contremarque sur hémichalque antipolitain*, dans *CahNum*, 95, 1988, p. 370-372.

manifestement à des noms romains, M.TEP et Δ.KOP, sans mention du *cognomen*, «comme il devait convenir aux représentants de leur gens»⁴ (*Terentia, Cornelia*) dans la jeune cité. Mais par ailleurs, il faut constater que nombre d'entre eux ne peuvent être que des débuts de noms grecs; par exemple, le même abrégé TI.Δ.KOP considéré dans son contexte ne peut que montrer l'association d'un nom grec (TI-) avec le nom romain que nous venons de voir. Le premier est donc représenté sans patronyme et l'autre sans *cognomen*. Ces solutions sont d'abord justifiées par l'exiguité du champ disponible, tout en restant plus explicites que des monogrammes.

Rv. : Victoire couronnant un trophée à dr.; en exergue, l'ethnique plus ou moins abrégé : nous avons relevé exceptionnellement (αv)ΤΙΠΟΛ; à dr., abrégé du *cognomen* ΛΕΠΙ pour M. Aemilius Lepidus, gouverneur de la *provincia* après la mort de César; quelquefois, les deux termes sont inversés.

À chaque classe déterminée par une des 18 légendes du droit correspond dans certains cas une métrologie ou une technique de fabrication de flan spécifique, et dans tous les cas un ou plusieurs styles spécifiques; enfin, les liaisons inter-classes pour les coins de revers ne sont pas évidentes. On est donc tenté de dissocier ces émissions, soit en supposant l'existence de plusieurs officines indépendantes, soit en recherchant une séquence chronologique. Dans quelle fourchette s'inscrit-elle? Le *terminus post quem* est lié à l'autorité de Lépide sur la région, et probablement à sa fonction pontificale; on pourra le préciser dans l'année 44 av. J.-C. La clôture de l'atelier avait été placée en 42 av. J.-C. en conséquence de la bataille de Philippes et du départ de Lépide pour l'Afrique; depuis, le compte des émissions de la *Colonia Victrix Iulia Lepida* en Citérieure a montré que cette cité avait pu conserver sa titulature complète jusqu'en 36 av. J.-C.⁵ Or, pour Antipolis, nous voyons que le nom de Lépide figure sur toutes les émissions, sauf une⁶, qu'il convient de relativiser par le nombre de coins utilisés, par une proportion de moins d'un pour cent. S'il est logique de reporter cette petite émission en fin de monnayage, cela signifie aussi que notre série n'a pu survivre longtemps au pouvoir du Triumvir. L'image que l'histoire en a gardé oblige à conclure, jusqu'à plus ample information, que la série monétaire antipolitaine n'a pu se poursuivre longtemps après la confrontation de Messine en 36 av. J.-C.

Quoiqu'il en soit, ce monnayage s'est donc développé dans le cadre de la guerre civile à Rome, et il est remarquable que l'idéologie de la cité et des origines, ainsi qu'une expression hellénistique, aient pu être maintenues dans le choix iconographique de la divinité poliade et dans l'épigraphie, non sans jeux d'ambiguïtés, pour le motif de revers par exemple; par ailleurs, plusieurs noms romains apparaissent, comme nous l'avons vu; mais il est probable, du fait de leur confrontation avec une majorité de noms grecs, qu'il s'agisse de résidents d'origine romaine, ou plus généralement italienne, installés dans ce port de transit, hellénisés comme l'ont pu être les *negociatores* à Délos au début du même siècle.

Tout nous laisse certes donc sous l'*imperium Romani*, mais dans une ambiance grecque qui justement aura pu être préservée au niveau des institutions par un statut de droit latin⁷, et qui pourra peut-être fournir une solution à l'adéquation d'un grand nombre d'émissions dans une période limitée à huit années environ. En effet, nous pourrions supposer que la cité naissante, ne pouvant disposer déjà d'une source publique de financement, et devant rapidement imposer son image monétaire, notamment face aux Massaliètes, ait tout naturellement utilisé le système coutumier de financement d'une

4 Voir J. COUPRY, *Onomastique non hellénique dans l'anthroponymie olbienne et massaliète en Ligurie marseillaise à la fin de l'époque hellénistique*, dans *Hommage à L. Lerat*, Paris, 1984, p. 209-220, en particulier la signature L. A/M.

5 L. VILLARONGA, *Numismatica antiqua de Hispania*, Barcelone, 1979, p. 243-244.

6 G. ROGERS, *op. cit.*, p. 85; nous devons confirmer cette absence sur l'exemplaire Fréjus Argentières 267.

7 Plin., *NH*, III, 35 «... At in ora, oppidum latinum Antipolis» et l'étude de G. ROGERS, *op. cit.*

dépense publique trop lourde, par l'appel à des particuliers qui ont pu apparaître sur d'autres monnayages de ce siècle⁸ comme liturges, dont l'épimélète, d'autres intervenant au *prorata* de leur apport au budget de l'émission; ce n'est en effet point par hasard si ces noms figurent toujours face à l'effigie de la divinité poliade, Apollon.



1. $\text{I}\Sigma\Delta\text{H}\text{M}$ J.-B. Vigne, 107; 2. $\text{I}\Sigma\Delta\text{H}\text{M}$ Cannes Ste Marguerite contremarque; 3. $\text{EY I}\Sigma$ Coll. J.M.; 4. $\Lambda\text{A.TE}$ Paris 2196; 5. $\Lambda\text{A KA}$ Copenhague 857; 6. $\text{TI}\Delta\text{.KOP}$ Vienne 412; 7. EPI PAP Fréjus Aig. 1505; 8. $\text{NI}\Delta\text{I}$ Copenhague 854; 9. $\Delta\text{H AI}$ Cannes Ste Marguerite; 10. $\text{MA}\Delta\text{H}$ Fréjus Dec. Max. 14; 11. ANT.ANT Fréjus Aig. 1528; 12. $\Lambda\text{PI}\Delta\text{K}$ Fréjus Aig. 1126; 13. AI.MA Fréjus Aig. 932; 14. AMAI Taradeau 19; 15. TEP.AIM Fréjus Arg. 245; 16. M.TEP Fréjus Aig. 1289; 17. ANTI Fréjus Aig. 354; 18. KAN Paris 2195; 19. -MO Fréjus Arg. 225; 20. $\Delta\text{O---}$ Cabasse 8; 21. Rv. abs. de ΔEPI Fréjus Arg. 267.

Monetary Iconography in Marc Antony's Issues

Maria Celeste FACHIN*

The coins presented are part of a catalogue of all the coins issued under the authority of the Roman general and Triumvir Marc Antony and kept in Brazilian public collections. These are unpublished coins from the *Museu Histórico Nacional* and the *Acervo Histórico do Centro Cultural do Banco do Brasil*, in Rio de Janeiro, and from the *Museu Paulista da Universidade de São Paulo* in São Paulo.

This catalogue is formed by forty-two coins issued from 43 B.C. to 31 B.C.

Based on an iconographical criterion, these coins were divided in two main groups. Guiding ourselves by the coins own characteristics, we have formed a group of ten coins with Marc Antony's portrait as obverse type, combined with four different reverse types : heads of Caesar or Octavian; Mars, naked, standing with military equipment; peristyle temple with head of Sun and galley without sail. The other group is formed by the famous legionary coins with repetitive types.

It is our purpose in this communication to present some of the reflexions we have made during the iconographical study of the first group mentioned above.

In our analysis, we departed from the premise that a coin in Antiquity is a unit constituted of elements which can be manipulated. These elements, chosen from the cognitive universe to which the coin comes from and is direct to, become the signs that carry specific message sometimes accompanied by a verbal speech (when there are legends). The coin is, thus, transformed in a vehicle of controlled communication. Controlled, naturally, by the official decision on which depends the coin production. During the Roman Republic, as it is well known, coins were propaganda vehicles of the issuing authorities, either the *Triumviri Monetales* or the magistrates as Marc Antony himself.

After the Senate authorized Caesar to have his own portrait on coins, heads as coin types assumed a much special meaning. From this time on, the portrait of living men started to appear on Roman coins.

So, characters who were to be portrayed on coins, became accessible models, closer to the engravers of dies, making it possible to the realistic tradition of Roman portraiture to manifest itself more clearly.

In the coins 1 and 2 (Fig. 1 and 2) here presented, which belong to the same series struck in Gallia in 43 B.C., we can observe an efficient exploitation of the coin's field in the sense of marking the political strength which Marc Antony experimented in the years immediately following Caesar's death. This fact is shown particularly by the portrait where his image has an aspect of virility, strength and maturity. These traces so typical of Roman iconography were the ideal attributes of a capable general in full exercise of his activity, especially during the process of expansion of Roman power.

We also verify in these coins the use of the relationship between Marc Antony and Caesar, making evident the first one's claim for the latter's political heritage.

This association with the *dictator* appears through three different elements :

1. Caesar's head as a reverse type;
2. the symbols of the priesthood held by both of them, placed behind their heads : the *lituus* meaning the augurship of Marc Antony and the *capis* for Caesar's pontificate;

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3. the beard used by Marc Antony, as a sign of mourning for Caesar's death and of the *vendetta* held against the Pompeians.

The communicative intention, the message of the coin are achieved by the criterious reunion of these elements. The legends act as secondary elements, pointing to the imperialism of Marc Antony, with no references to his Triumvirate or to any other of his attributes.

Finally, these coins weigh 3.90 g and 4.08 g respectively. Higher than the weight of the coins of the following years, this is marking probably the political strength and the general's prestige in the first years of Civil War.

Next, we shall analyse coins 3 and 4 (Fig. 3 and 4) dated to 41 and 39 B.C., which, we believe, represent another communicative channel adopted by Marc Antony in his coinage. Two alterations can be seen in their iconography: the first one is the head of Octavian which appears as reverse type, and the second concerns the legends, which mention the priestly titles and the Triumvirate of both generals.

These series, struck in different years, show a progressive abandon of the idea of linking Marc Antony to Caesar, since, by this time, it was impossible to refute Octavian's position as Caesar's official heir, already accepted by the Roman community.

In these coins, the Triumvirate is explored, appearing as symbol of an alleged Republican unit between peers. The legends point to the equality of Marc Antony's and Octavian's attributes, showing the involved dispute over the centralized power.

We also remarked that in these legends, Marc Antony was very careful not to attribute to Octavian the title of *divi Iuli filius*, because the acceptance of a divine title would necessarily imply his subordination to his own opposer.

The stylistic execution of the portraits on these coins shows, on one side, a predominance of positive elements in Marc Antony's image while on the other, Octavian appears extremely youthful as to expose his inexperience and unsuitability to hold important civil and military positions. Likeness in Marc Antony's portrait on the coin types follows general rules of Roman portraiture and engravers probably had the advantage of the proximity of the general, because mints were moving along him.

Beside these alterations we also note a slight fall in the average weight of this kind of coins. Is this already a sign of a certain political weakness of Marc Antony? This point will receive some attention later in our analysis.

Finally, we present another pair of coins, pieces 5 and 6 (Fig. 5 and 6), dated to 36 B.C. and 33 B.C., so belonging to the following period, of civil strife. On these coins we verified that propaganda elements are vanishing. From 38 B.C. on, Marc Antony stopped using Octavian's portrait on the reverse of his coins (by this time Octavian also employed only his own portrait on his coins) and avoided his titles on the legends.

Obverse legends make references only to his consulship and augurship, and indicate his title (ANT AVG III VIR RPC) which is present anyway in the whole of his coinage. Reverse legends are very laconic, mentioning only the imperialism and again the augurship.

The military type on the reverse of the coin is indicative of a tendency in Marc Antony's coinage of making references to his own ability, always putting in relief his victorious battles and important conquests.

Through the traces of Marc Antony in his portrait in these two coins, we are able to distinguish a very marked physical transformation. This occurs especially in coin 6 where it is possible to see a loss of attractiveness of the image; the face seems hopeless, maybe indicating the negative perspective of the dispute with Octavian.

Departing from these brief commentaries on this small sample of Marc Antony's coinage, we understand that the coin as a unit bearing a propagandistic message has a limited performance.

Some of these limitations regard the coins' own characteristics, such as the reduced space there is on the flan to represent what is wanted. This trace implies that the elements to be figured on one coin should be very carefully chosen in order to pass a maximum of information through their briefness.

On the other hand, there are subjective limitations imposed by cultural heritage of the issuing authorities and the public to whom the coin are destined. In this sense, the

Roman coin had, since its origin, a close link to narrative representations (legendary or not). In the period in question, connection with life reality was a must. This reality was sometimes elaborated in a positive way and other times its own absence had a special meaning. This was the case, for example, of the absence of the legend *divi Iuli filius* on Marc Antony's coinage.

Considering Roman portraiture, the limitation of coins as vehicles of a positive political propaganda is more visible. Roman artistic tradition imposed that images should be realistic, that portraits should keep their likeness as much as possible. Even states of mind should be detectable through a portrait. In this way, the use of a determined portrait on a coin could bring up unpredictable features, like those of Marc Antony's final issues which are far from acting as a positive element of his personal propaganda.

These few examples show how coins are manysided vehicles of communication. Transmission of messages is achieved on coins through the combination of several elements in one single mint. On the other hand, we may say that coins keep a special autonomy which restricts the intentions of the issuing authority and which indicates their validity as historical documents.



Fig. 1. Crawford, RRC, 1974, 488-1. Collection of Museu Paulista da Universidade de São Paulo, São Paulo; 2. Crawford, RRC, 1974, 488-1. Collection of Acervo Histórico do Centro Cultural do Banco do Brasil, Rio de Janeiro; 3. Crawford, RRC, 1974, 517-2. Collection of Museu Histórico Nacional, Rio de Janeiro; 4. Crawford, RRC, 1974, 528-2b. Collection of Museu Histórico Nacional, Rio de Janeiro; 5. Crawford, RRC, 1974, 536. Collection of Museu Paulista da Universidade de São Paulo, São Paulo; 6. Crawford, RRC, 1974, 542-2. Collection of Museu Histórico Nacional, Rio de Janeiro.

Chefs-d'oeuvre grecs et monnayage romain de la République

Mary-Anne ZAGDOUN*

H. Mattingly¹ incitait à étudier l'art monétaire de la République en rapport avec les arts de la même époque. Et il signalait toute une série de types monétaires qui lui paraissaient reproduire des chefs-d'oeuvre, aujourd'hui en grande partie disparus.

Je me limiterai ici à la présentation de quelques reproductions d'oeuvres d'art grecques figurant sur les monnaies de la fin de la République, à l'exclusion toutefois des portraits et des têtes idéalisées. Quoi en effet de plus tentant que de rechercher un écho dans la numismatique romaine de ces très nombreux chefs-d'oeuvre grecs qui avaient rempli Rome à la suite des grands triomphes ? D'autant que, dans la plupart des cas, nous ne connaissons ces oeuvres que par des allusions littéraires² qui ne permettent que très rarement de faire des rapprochements avec des statues ou des oeuvres d'art parvenues jusqu'à nous.

Or, plusieurs constatations se sont imposées à moi au cours de ma recherche. Les graveurs monétaires de la République ne reproduisent pas en général des types statuaire mais s'inspirent de sources variées pour créer des motifs nouveaux, qui ne sont souvent que des adaptations de statues célèbres. On peut toutefois supposer, encore que les preuves nous manquent le plus souvent sur cette question, que les statues de culte ont dû être recopiées avec un peu plus de fidélité. Ces représentations monétaires d'oeuvres d'art témoignent du goût du public romain pour l'art grec des Ve et IV^e siècles. Elles ont sans doute aussi contribué, avec d'autres sources plus importantes, à répandre l'art classicisant à Rome. Grecques par leur inspiration, elles ne peuvent enfin être comprises qu'à l'aide d'un certain nombre de conventions romaines, propres au langage monétaire de leur temps.

Qu'elles véhiculent des goûts artistiques ou se prêtent à la propagande politique³, ces images reflètent certainement la mentalité de la classe dirigeante. Leur influence sur le grand public est peut-être plus difficile à saisir, dans la mesure où il est malaisé d'évaluer l'attention prêtée autrefois à Rome à ces objets de la vie quotidienne.

Un denier d'argent (Fig. 1)⁴ illustre particulièrement bien le schéma proposé : sources variées, diffusion du classicisme, langage monétaire propre à la fin de la République. Ce denier a été émis entre 42 et 38 par Sextus Pompée, le fils du Grand Pompée⁵. Bien que les composantes de la représentation et leurs sources soient connues depuis longtemps et aient été bien analysées, elles méritent d'être reprises ici, parce qu'elles montrent de façon certaine un processus de création qu'on ne pourra que deviner ailleurs.

* CNRS, Paris.

Pour l'illustration, j'exprime toute ma reconnaissance au British Museum de Londres (photographies des monnaies, échelle environ 2:1) et à l'Institut archéologique allemand de Rome (fig. 11, 13 et 15).

¹ H. MATTINGLY, *Roman Coins from the Earliest Times to the Fall of the Western Empire*, Londres, 1928, p. 87-88.

² B.S. RIDGWAY, *Roman Copies of Greek Sculpture*, Ann Arbor, 1984, p. 109-111.

³ On renverra sur ce point précis à Th.R. MARTIN, *Sulla Imperator iterum, the Samnites and Roman Republican Coin Propaganda*, dans *RSN*, 68, 1989, p. 19-44.

⁴ Courtesy Trustees British Museum. Voir H.A. GRUEBER, *Coins of the Roman Republic in the British Museum*, II, Londres, 1910, p. 561, n°12.

⁵ Sur ce type monétaire, voir notamment H. ZEHNACKER, *Moneta. Recherches sur l'organisation et l'art des émissions monétaires de la République romaine (289-31 av. J.-C.)* (BÉFAR, 222), Paris-Rome, 1973, p. 905-906.

Neptune, debout de profil, le pied droit posé sur la proue d'un navire, la main droite tendue en avant et tenant un aplustre, s'apparente à un type statuaire bien connu et dont les meilleurs représentants pourraient être le Poséidon du Latran (Fig. 11)⁶ et un grand bronze du Musée National d'Athènes⁷. Ce type statuaire est attribué à Lysippe⁸. Il a été reproduit fidèlement en numismatique grecque, notamment sur les tétradrachmes de Démétrios Poliorcète, émis à Pella en 291-290 et, l'année suivante, à Amphipolis⁹. Or sur le denier de Sextus Pompée, il ne s'agit pas d'une copie en miniature, comme sur les monnaies grecques, mais d'une variante. Comme l'a très bien montré P. Moreno, le Neptune de notre monnaie ne s'inspire que d'assez loin du type statuaire de Lysippe : les différences sont nombreuses, tant dans la représentation des attributs que dans le geste des bras¹⁰. Par contre, la représentation monétaire romaine doit être rapprochée d'une série de représentations sur pierres précieuses qui, à partir du 1^{er} siècle av. J.-C., montrent une typologie très similaire¹¹. Ce thème n'est pas isolé dans le monnayage de Sextus Pompée dont certains deniers¹² portent au revers un type similaire de Neptune surmontant un phare.

La même variété des sources caractérise la représentation des frères catanéens, Anapias et Amphinomos qui, de part et d'autre de Neptune, portent chacun sur leurs épaules un de leurs parents qu'ils ont sauvé de l'Etna¹³. Les sources de ce motif sont diverses. Elles doivent d'abord être cherchées dans le monnayage sicilien de Catane au III^e siècle¹⁴, avec lequel le denier de Sextus Pompée, également frappé en Sicile, présente certaines analogies iconographiques. D'autres exemples de l'influence exercée par les types monétaires les uns sur les autres peuvent être relevés dans le monnayage de la République. Il suffit de penser aux premières monnaies d'Octave représentant Énée portant Anchise¹⁵ : elles sont inspirées du motif des frères catanéens, tel qu'il figure sur les deniers d'Hérennius émis en 108-107. C'est d'ailleurs probablement pour répondre à la propagande d'Octave et pour exalter le souvenir de son père que Sextus Pompée reprend le même motif¹⁶. Autres sources possibles pour le motif figurant sur le denier de Sextus Pompée : la statue de culte qui se dressait à Catane et dont un écho nous est peut-être parvenu grâce à un poème de Claudien¹⁷ et également l'iconographie d'Énée portant Anchise, attestée dans l'art grec dès l'époque archaïque¹⁸.

La comparaison entre le Poséidon du Latran et son adaptation tardive sur le denier romain illustre bien toute la différence qui sépare l'art classique de l'art classicisant. Le

6 Photographie Institut archéologique allemand de Rome, DAI 80.733. Voir aussi P. MORENO, *Una cretula di Cirene e il Posidone del Laterano*, dans *Quaderni di Archeologia della Libia*, 8, 1976, fig. 8, p. 86. Sur ce type statuaire, voir W. FUCHS, *Kolossalstatue des Poseidon (1188)*, dans W. HELBIG, *Führer durch die öffentlichen Sammlungen klassischer Altertümer in Rom*⁴, vol. 1, Leipzig, 1963, p. 798-799, n°1118.

7 Voir P. MORENO, *loc. cit.*, fig. 7, p. 85.

8 *Ibidem*, p. 83 sqq.

9 *Ibidem*, fig. 5, p. 84 et, pour un écho sur des didrachmes des Bruttii datant de la même époque, voir *ibid.*, fig. 6 à la p. 84.

10 Voir *ibidem*, p. 90 et p. 95.

11 *Ibidem*.

12 Voir M.-H. CRAWFORD, *Roman Republican Coinage*, Londres-New York, 1974, p. 520, n°4 a.

13 On renverra sur cette légende à C. ARNOLD-BIUCCHI, *LIMC* I, 1981, s.v. *Amphinomos et Anapias*, p. 717-718.

14 Voir *ibidem*, fig. 1.

15 Voir W. FUCHS, *Die Bildgeschichte der Flucht des Aeneas*, dans *ANRW*, I, 4, 1973, p. 624-627.

16 C'est la conclusion de Chr. PEREZ, *La Monnaie de Rome à la fin de la République. Un discours en image* (Collections Numismatiques), Paris, 1989, p. 97.

17 Claudien, *Carmina minora*, 17, *De piis fratribus et de statu eorum quae sunt apud Catinam* : ce court poème est bâti selon les règles de l'*ekphrasis* et l'on peut se demander si la statue décrite est imaginaire ou non.

18 Ces représentations ont été réunies par W. FUCHS, dans sa recherche iconographique sur Énée et Anchise, *ANRW*, I, 4, 1973, p. 615-632.

dessin plus ample et plus ouvert de la représentation monétaire, l'attitude simplifiée du dieu, l'adjonction de détails nouveaux et en particulier du petit himation qui flotte dans le dos de Neptune, donnent l'impression d'une recherche du mouvement qui s'effectue au détriment de la rigueur.

La signification politique de cette représentation monétaire a été souvent analysée. L'exaltation de la *pietas*, à laquelle fait allusion la légende des frères catanéens, s'explique aussi bien par le souvenir de Pompée, père de Sextus, que par l'image de Neptune, ancêtre mythique de la famille¹⁹. Le dieu tient une place importante dans le monnayage de Sextus Pompée²⁰.

Les mêmes réflexions me paraissent s'appliquer aux représentations d'Héraclès et des Muses qui ornent le revers des deniers d'argent émis en 66 av. J.-C. par Q. Pomponius Musa²¹. Les sources de ces représentations pourraient certes remonter à des oeuvres de la grande statuaire, aujourd'hui perdues. Toutefois, il est peu probable qu'elles reproduisent, comme on l'a cru pendant longtemps, le groupe d'Héraclès et des Muses, ramené d'Ambracie à Rome en 189 av. J.-C. par M. Fulvius Nobilior, qui en décora le temple d'Héraclès et des Muses situé près du cirque Flaminius²². Récemment encore, M.T. Marabini Moeus cherchait plutôt un écho de ce groupe dans les représentations de vases arrétins et dans la grande statuaire²³. D'autre part, M. Wegner²⁴ remarquait qu'il y avait dans le monnayage de Pomponius Musa au moins quatorze représentations de Muses, ce qui exclut une source statuaire avec les neuf Muses traditionnelles qui semblent avoir composé le groupe d'Ambracie. Les représentations monétaires des Muses ne sauraient être réduites à neuf qu'au prix de simplifications excessives, notamment dans la typologie des instruments de musique que l'Antiquité distinguait toujours très soigneusement.

Le graveur monétaire a pu fort bien avoir emprunté une grande partie de son inspiration à des créations perdues du grand art. Quelques indices toutefois, sinon des preuves certaines, me font penser que ces représentations doivent beaucoup à l'art de la glyptique. L'Apollon aux boucles libyques qui orne le droit de l'Héraclès Musagète (Fig. 2)²⁵ a des parallèles en glyptique et les essais pour y reconnaître l'écho d'un type statuaire restent hypothétiques²⁶. Clio (Fig. 3)²⁷ reproduit un type de drapé populaire au Ve siècle et rappelle une représentation de glyptique de cette époque²⁸. D'autre part, un grand nombre de ces Muses s'appuie sur une colonne ou y pose leur instrument de

19 Voir note 16 et, du même auteur, *Monnaie du pouvoir. Pouvoir de la monnaie*, Paris, 1986, p. 278-279.

20 *Ibidem*, p. 355-356.

21 Sur ce monnayage, voir notamment H. ZEHACKER, *op. cit.*, p. 692-693 et M.H. CRAWFORD, *op. cit.*, II, 1974, p. 733.

22 Sur ce temple, voir M. MARTINA, *Aedes Herculis Musarum*, dans *Dialoghi di archeologia*, 1, nuova serie, 3, 1981, p. 1-68.

23 Voir M.T. MARABINI MOEUS, *Le muse di Ambracia*, dans *BollArte*, s. 6, 65, fasc. 12, 1981, p. 1-58.

24 M. WEGNER, *Die Musensarkophage (Die antiken Sarkophagsreliefs)*, V, 1, Berlin, 1966, p. 94.

25 Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, p. 441, n°3602.

26 Voir Fr. QUEYREL, dans *Actes du 13e Congrès International d'archéologie classique*, Berlin, 1988, Mayence, 1990, p. 45.

27 Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, p. 443, n°3610.

28 Voir G.M.A. RICHTER, *The Engraved Gems of the Greeks, Etruscans and Romans*. I. *Engraved Gems of the Greeks and the Etruscans*, Londres, 1968, n°538.

musique : Clio que nous avons déjà vue, Calliope (Fig. 4)²⁹, Thalie (Fig. 5)³⁰, Euterpe (Fig. 6)³¹, Eratô (Fig. 7)³². Cet argument n'est certes pas contraignant, bien que le motif du pilier ou de la colonne soit beaucoup plus fréquent en glyptique qu'en sculpture. À défaut de preuves, ces impressions sont renforcées par l'identification probable du graveur monétaire de cette série avec le graveur sur gemmes Pamphilos³³. Comme la monnaie de Sextus Pompée (Fig. 1), le monnayage de Pomponius Musa montrerait l'importance des arts mineurs dans les représentations de certains types statuariers grecs de la République.



Fig. 1. Neptune et les frères catanéens; 2. Tête d'Apollon; 3. Clio; 4. Calliope; 5. Thalie; 6. Euterpe; 7. Eratô; 8. Artémis d'Éphèse; 9. Zeus Éleuthérios; 10. Victoria et quadriga.

Ici encore, le monnayage apparaît comme le véhicule du classicisme. Les réminiscences de l'art grec sont très nombreuses notamment dans la représentation très répétitive du drapé. Calliope (Fig. 4) est particulièrement représentative, avec son schéma classique qui annonce certaines représentations augustéennes. Ici encore, nous retrouvons, avec l'allusion au nom du magistrat monétaire, les Muses évoquant Q. Pomponius Musa, un des aspects de ce monnayage fortement politisé.

²⁹ Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, p. 442, n°3606.

³⁰ Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, p. 445, n°3627.

³¹ Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, p. 443, n°3613.

³² Photographie Courtesy British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, n°3612.

³³ Voir H. ZEHNACKER, *op. cit.*, p. 856-859.

On pourrait supposer que les types statuaires grecs les plus fidèlement copiés aient été les statues de culte. L'Hygie au serpent a servi de modèle à la personnification romaine de la santé³⁴. Chacun connaît les représentations très simplifiées de l'Artémis d'Éphèse qui figurent au revers de deniers frappés en 49 en Sicile par les consuls L. Cornélius Lentulus et C. Claudius Marcellus (Fig. 8)³⁵ en fuite devant César. Éphèse fut une étape de leur exil. Mais, ces exemples mis à part, si l'on peut supposer une certaine fidélité dans la représentation monétaire, le degré de fidélité dans la reproduction est très difficile à déterminer, souvent par suite d'une absence de parallèles. Les deux monnaies suivantes en sont un bon exemple.



Fig. 11. Poséidon du Latran.



Fig. 12. Zeus ?

Chacun connaît la représentation de Zeus Éleuthérios qui figure comme symbole de liberté au revers de deniers frappés par les mêmes consuls, au cours de leur exil (Fig. 9)³⁶. Elle reproduit sans doute la statue de culte, élevée à Syracuse en 460 av. J.-C., après la chute du tyran Thrasybule³⁷. Le dieu tient ici un aigle sur sa main gauche et semble prêt à lancer le foudre. Ni la coiffure, ni la position des bras, ni la pondération de la représentation ne permettent d'en rapprocher, ainsi que le proposait A. Furtwängler³⁸,

³⁴ Sur l'iconographie d'Hygie, voir maintenant H. SOBEL, *Hygieia, Die Göttin der Gesundheit*, Darmstadt, 1990.

³⁵ Photographie Courtesy Trustees British Museum. Sur cette monnaie, voir H.A. GRUEBER, *op. cit.*, II, 1910, p. 467, n°23 (inv. BM, PCR 210). Sur ce monnayage, voir notamment Chr. PEREZ, *op. cit.* (à la note 19), p. 94-95. Sur l'idole d'Artémis qui orne le revers de deniers frappés en Afrique par les partisans de Pompée, voir A. ALFÖLDI, *Caesariana. Gesammelte Aufsätze zur Geschichte Caesars und seiner Zeit*, Bonn, 1984, p. 215-224, pl. 1-4 (aux p. 225-228).

³⁶ Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, II, 1910, p. 558, n°1.

³⁷ Voir les références données par Chr. PEREZ, *op. cit.* (à la note 19), p. 94 et cf. *RL*, VI, 1924-1937, col. 621, n°16.

³⁸ Voir A. FURTWÄNGLER, *Meisterwerke der griechischen Plastik*, Leipzig, 1893, p. 403-410, pl. 23-24. La fig. illustrée ici reproduit la pl. XXIII de cet ouvrage.

une statue de Munich (Fig. 12), dont la tête rappellerait la tête de Zeus figurant au droit de monnaies syracusaines³⁹. Notre représentation est isolée.

Une triple Hécate archaïsante orne le revers de deniers émis en 43 av. J.-C. par P. Accoleius Lariscolus (Fig. 14)⁴⁰. Elle représente la statue de culte de Diane de Nêmi, allusion aux origines du *quattuorvir monetalis*, dont la famille venait de la cité toute proche d'Arice. Un certain nombre de sculptures ont été rapprochées à tort de cette représentation, et notamment une série de péplophores, dont une statue du Musée de Tripoli en Libye, qui provient des thermes de Leptis Magna et qui représente peut-être Artémis (Fig. 13)⁴¹. La date de ce type statuaire n'est pas établie avec certitude. Certaines de ces péplophores sont plus tardives que la représentation monétaire. Quant aux analogies de style que l'on pourrait relever entre la statue de Nêmi et le drapé de ces péplophores, elles ne sont guère étonnantes dans l'art archaïsant, dont le style figé se prolonge sans beaucoup de changements de l'époque hellénistique à l'époque impériale. Il faut également dissocier de la représentation monétaire une tête trouvée à Nêmi (Fig. 15), dont rien ne prouve qu'elle se rapporte à la statue de culte, malgré la présence à l'arrière d'une cavité attribuée à la présence d'une barre⁴². Rien ne prouve même qu'il s'agisse d'une représentation de Diane, malgré son lieu de provenance. Une Artémis archaïsante d'Éphèse⁴³ ne paraît pas davantage reproduire une des figures du type statuaire, malgré certaines ressemblances stylistiques qui ont été expliquées par les relations qui existaient entre les deux sanctuaires de Nêmi et d'Éphèse.

La représentation sur notre monnaie est tout à fait isolée.

Il ne convient pas de s'attarder ici sur les nombreuses variantes de la Vénus Génétrix dans le monnayage romain. Elles montrent bien la liberté que prenaient les graveurs romains avec leurs modèles⁴⁴. Et, sortant du domaine de la sculpture, je voudrais terminer par le très célèbre denier d'argent émis en 47 av. J.-C. par L. Plautius Plancus (Fig. 10)⁴⁵. Une Victoire ailée est représentée devant un quadrigé qui s'élève dans les airs, *Victoria quadrigam in sublime rapiens*⁴⁶, nous dit Pline, en décrivant le tableau de Nicomachus représentant le même thème et dédié au Capitole en 43 av. J.-C. par le frère du magistrat monétaire, L. Munatius Plancus en 43 av. J.-C.⁴⁷. Pour les

³⁹ Pour des représentations de Zeus Éleuthérios sur les monnaies syracusaines, voir R. STUART POOLE, *A Catalogue of the Greek Coins in the British Museum, Sicily*, Londres, 1876, p. 184, n°265, p. 189, n°311.

⁴⁰ Photographie Courtesy Trustees British Museum. Sur ce monnayage, voir A. ALFÖLDI, *Diana Nemorensis*, dans *AJA*, 64, 1960, p. 137-144, pl. 31-34.

⁴¹ Photographie Institut archéologique allemand de Rome, n°61.1816. Sur cette série de péplophores, on renverra à M.D. FULLERTON, *The Archaistic Style in Roman Statuary (Supplements to Mnemosyne*, 110), Leiden, 1990, p. 17 sqq., où la coré de Tripoli est illustrée p. 37, fig. 3. Pour des conclusions différentes sur cette même question, voir M.-A. ZAGDOUN, *La sculpture archaïsante dans l'art hellénistique et dans l'art romain du Haut-Empire (BÉFAR*, 269), Paris-Athènes, 1989, p. 206.

⁴² Photographie Institut archéologique allemand de Rome, n°7213. Pour une mise au point sur cette tête de Nêmi, voir M.-A. ZAGDOUN, *op. cit.*, p. 196. Voir aussi sur cette question les précieuses remarques de H.G. MARTIN, *Römische Tempelkultbilder. Eine archäologische Untersuchung zur späten Republik*, Rome, 1987, p. 182 sqq., n°7, qui établit un lien entre cette tête et une réfection de la statue de culte vers l'époque claudienne (p. 184).

⁴³ Voir M.-A. ZAGDOUN, *op. cit.*, p. 197. L'étude de cette statue a été reprise par M.D. FULLERTON, *op. cit.*, p. 17 sq. et p. 30, n°1.

⁴⁴ Voir la courte notice de R.B. ULRICH, *The Many Faces of Venus Genetrix*, dans *AJA*, 94, 1990, p. 312.

⁴⁵ Photographie Courtesy Trustees British Museum. Voir H.A. GRUEBER, *op. cit.*, I, 1910, p. 516, n°4004.

⁴⁶ Pline, *NH*, XXXV, 10, 36.

⁴⁷ Voir M.-H. CRAWFORD, *op. cit.*, p. 453; H. ZEHNACKER, *op. cit.*, p. 601-602.

circonstances de cette dédicace et sa signification, je renvoie à l'article de G. Walser⁴⁸ qui fait autorité sur ce sujet. La monnaie reproduit très probablement la peinture de Nicomachos. À cet égard, les découvertes récentes de peintures à Vergina, dont certaines sont attribuées avec vraisemblance à ce peintre, nous permettront peut-être un jour de mieux connaître son style et de mieux situer l'adaptation du graveur monétaire romain par rapport à l'oeuvre du peintre⁴⁹.



13



14



15

Fig. 13. Artémis (?) de Leptis Magna; 14. Artémis-Hécate de Némé; 15. Tête de Diane (?).

Les circonstances politiques qui entourent chacune de ces représentations n'ont pu être évoquées ici que très rapidement. À côté d'allusions à des faits politiques, nous avons aussi relevé à plus d'une reprise l'exaltation d'une famille, d'un individu. Quant au style de ces représentations, elles sont dans la droite ligne du classicisme romain qui sut aussi faire leur place au style archaïsant et aux imitations du style sévère, pour lequel les Romains semblent avoir eu de la prédilection.

Ces quelques notes de lecture que j'ai tenu à vous soumettre montrent que les types statuaire grecs ont été reproduits sur les monnaies de la fin de la République avec une certaine liberté. L'influence des arts mineurs se fait sentir à plus d'une reprise. Ces types statuaire sont rendus dans un style classicisant caractéristique et ont pu contribuer à la diffusion de ce style. Plus que par leur fidélité à des modèles de la grande sculpture, ils ont intéressé les magistrats monétaires par le sens que leur donnaient l'actualité et la politique de leur temps.

⁴⁸ Voir G. WALSER, *Die Victoria des L. Munatius Plancus*, dans *Theoria, Festschrift für W.H. Schuchhardt, Deutsche Beiträge zur Altertumswissenschaft*, XII-XIII, Baden-Baden, 1960, p. 217-223.

⁴⁹ Sur les fresques de la tombe de Perséphone à Vergina et leur attribution à Nicomachos, voir M. ANDRONICOS, *Vergina, The Royal Tombs and the Ancient City*, Athènes, 1984, p. 86-95; P. MORENO, *Pittura greca. Da Polignoto ad Apelle*, Milan, 1987, p. 103-107; A. ROUVERET, *Histoire et imaginaire de la peinture ancienne (Ve siècle av. J.-C. - 1er siècle ap. J.-C.)* (BÉFAR, 274), Paris-Rome, 1989, p. 222 sqq.

Osservazioni sulla circolazione monetaria di età repubblicana nella regione Emilia Romagna. Il numerario romano d'argento

Bartolomeo MAZZOTTA*

La ricerca da me condotta si è indirizzata ad analizzare i ritrovamenti di monete di età repubblicana avvenuti nell'odierna regione italiana dell'Emilia Romagna ed ha tentato, sulla base dell'analisi di tali rinvenimenti, di estrapolare dati che potessero offrire spunti per fare alcune considerazioni sulla circolazione monetale nell'età e sul territorio presi in esame¹.

È importante sottolineare che la moneta, proprio per la sua natura di mezzo di scambio, elude le costrizioni in aree geografiche o culturali precisamente determinate; quindi, per uno studio sulla circolazione monetale, la zona da prendere in esame va valutata con criteri elastici, svincolandola da limiti territoriali troppo rigidi².

Il territorio emiliano-romagnolo è comunque delimitato da confini geografici naturali piuttosto netti che gli conferiscono una specifica individualità. Proprio grazie a questi confini naturali ben definiti l'attuale territorio regionale trova quasi una perfetta rispondenza in età romana infatti, nell'ordinamento territoriale amministrativo creato da Augusto, nacque l'*VIII regio*³ che con poche varianti (ne erano escluse Sarsina e Mevaniola) abbracciava proprio quell'area oggi occupata dalla regione Emilia Romagna.

Le monete prese in considerazione per la mia ricerca sono tutte quelle che investono il territorio regionale a partire dalla «romanizzazione» fino alla fine dell'età repubblicana.

Uno dei primari obiettivi del mio studio è stato quello di dar vita ad una schedatura sistematica di questo materiale numismatico, e proprio a tale fine è stata realizzata una raccolta delle notizie inerenti i rinvenimenti di monete avvenuti in Emilia Romagna⁴.

Tutti i ritrovamenti monetali sono stati sistematicamente catalogati e a tal proposito si è cercato di adottare un tipo di schedatura che raccogliesse, in maniera chiara e sintetica, il maggior numero di notizie⁵.

La seconda fase della ricerca è stata quella di analizzare fra loro tutti i dati reperiti con lo scopo, come già detto, di tentare di organizzare un discorso sulla circolazione monetaria nell'età e nel luogo suddetti, discorso che fosse il più possibile fedele alla realtà. Proprio per questo si è evitato di ipotizzare conclusioni troppo azzardate soprattutto quando la scarsità dei dati in mio possesso consigliava di farlo.

La presenza romana nella regione Emilia Romagna ha avuto molteplici conseguenze sul piano politico, economico, etnico e sociale. È stata, infatti, proprio la «romanizzazione» ad aver dato un forte impulso alla crescita e all'urbanizzazione della

* Roma.

¹ Per la realizzazione di questo lavoro sono stati di estrema ed indubbia utilità gli attenti studi, a cui la presente ricerca ha fatto costante riferimento, condotti dalla Prof.ssa E. Ercolani Cocchi; proprio a Lei va il mio sentito ringraziamento per l'apporto scientifico, per i preziosi suggerimenti e per l'estrema disponibilità mostratami. Ringrazio altresì il prof. Fr. Panvini Rosati che, con estrema cura, ha seguito il mio lavoro.

² E. ERCOLANI COCCHI, *I rinvenimenti monetali in territorio ravennate*, in *CARB*, 1976, p. 196-197; ID., *Circolazione monetale e tesaurizzazione a Cesena e in Romagna nell'età antica*, in *Storia di Cesena, I. L'Evo Antico*, a cura di G. SUSINI, Rimini, 1982, p. 172.

³ Plinio, *Nat. Hist.*, III, 115.

⁴ È mio dovere far presente che i dati utilizzati per la schedatura sono stati unicamente tratti da pubblicazioni, non ho quindi attinto a fonti inedite.

⁵ La scheda tipo, organizzata in diverse voci relative ai dati del ritrovamento e agli esemplari recuperati (da me realizzata nell'ambito della mia Tesi di Laurea) è stata riassunta, per motivi di spazio, nell'Appendice A.

regione che, con la creazione di numerose colonie e di una efficiente rete viaria, è stata presto inserita nel valido sistema economico romano⁶.

Il governo di Roma per attuare il suo piano di appoderamento coloniale, meglio conosciuto come centuriazione⁷, ha soprattutto svolto una vasta opera di bonifica dei terreni paludosi e boschivi ed ha creato un efficace sistema di distribuzione idrica⁸. Tutto ciò ha provocato un netto aumento di terra coltivabile che è stata immediatamente sfruttata proprio grazie alle assegnazioni coloniali e «viriliane».

La piccola proprietà, generata dal copioso numero di assegnazioni, ha avuto come immediato riflesso un notevole incremento dell'agricoltura favorita anche dall'inserimento di nuove colture⁹.

La presenza romana ha segnato quindi, rispetto all'età precedente, un decisivo cambiamento anche e soprattutto nel campo economico.

Sotto la spinta dello sviluppo agricolo, anche gli altri settori dell'economia hanno cominciato a svilupparsi e tutto ciò ha riversato nella regione interessi economici, oltre che politici, traffici e scambi commerciali, apportando un rapido beneficio anche alla circolazione monetaria.

La presenza dell'elemento romano in Emilia Romagna ha favorito quindi l'intensificarsi della circolazione monetaria. Questo è avvalorato dai rinvenimenti di monete che indicano come, prima della «romanizzazione», la moneta circolasse in modo molto limitato non costituendo ancora un connotato costante del sistema di scambio¹⁰.

In questa sede mi occuperò esclusivamente del numerario romano d'argento.

Il vittoriato

Con il consolidarsi della presenza romana, evidenziata anche dalla definitiva sistemazione della via Emilia del 187 a.C., si diffonde nel territorio emiliano romagnolo il vittoriato.

Mentre nei territori al di là del Po il vittoriato viene spesso recuperato in associazione con dramme di imitazione massaliota¹¹, in Emilia Romagna, ed in particolare nel Nord dell'Emilia, questa moneta si trova invece solitamente associata agli assi onciali¹².

Proprio assi onciali e vittoriati costituiscono la prima consistente presenza monetale nella regione, dimostrando di avere una parte predominante nella circolazione tra la fine del III ed il primo quarto del II secolo a.C.; tale situazione è del resto documentata ed evidenziata dai cospicui ritrovamenti di queste monete (si veda Fig. 1).

⁶ Per la presenza romana nella regione cfr.: G. SUSINI, *Profilo di storia romana della Romagna. La cronologia dei centri romani della Romagna e la fondazione di Faenza*, in *Studi Romagnoli*, 8, 1957, p. 3-45; G. TIBILETTI, *La romanizzazione della valle padana*, in *Arte e Civiltà Romana nell'Italia Settentrionale*, I, Bologna, 1964, p. 27-36; G.A. MANSUELLI, *La romanizzazione dell'Italia settentrionale*, in *Atti del Centro Studi e Documentazione sull'Italia romana*, III, Milano, 1970, p. 23-41; G. SUSINI, *La Cispadana romana*, in *Storia dell'Emilia Romagna*, I, a cura di A. BERSELLI, Bologna, 1976, p. 103-124.

⁷ R. CHEVALLIER, *La centuriazione della Regio VIII*, in *L'Universo*, 40, 1960, p. 1077-1104.

⁸ G. SUSINI, *op. cit.*, Bologna, 1976, p. 114-115.

⁹ J. ORTALLI, *L'età romana*, in *Monterenzio e la valle dell'Idice*, Monterenzio, 1983, p. 215-216.

¹⁰ M.T. GULINELLI, *I ripostigli di San Cesario e Ganaceto*, in *Miscellanea di Studi Archeologici e di Antichità*, II, Modena, 1986, p. 79-80.

¹¹ Per l'area veneta si veda G. GORINI, *Ritrovamenti monetali e divisioni agrarie nel Veneto romano. In Misurare la terra: centuriazione e coloni nel mondo romano. Il caso Veneto*, Modena, 1984, p. 73.

¹² E. ERCOLANI COCCHI, *op. cit.*, in *CARB*, 1976, p. 198; ID., *Aspetti e problemi della circolazione monetaria: dai mezzi di scambio premonetali alla zecca di Ravenna*, in *Storia dell'Emilia Romagna*, a cura di A. BERSELLI, Bologna, 1976, p. 203.



Fig. 1.

Alcuni vittoriati sono stati trovati in ripostiglio come quelli scoperti a Roncofreddo nel 1756¹³, a San Cesario nel 1834¹⁴ e davanti al palazzo Vescovile di Imola nel 1913¹⁵.

Un vittoriato è stato recuperato assieme a quattro assi onciali all'interno di un sepolcro a Ganaceto¹⁶.

Tutti gli altri vittoriati provengono da ritrovamenti sporadici. Questi si distribuiscono soprattutto lungo la direttrice della via Emilia ed interessano quasi esclusivamente la parte orientale della regione.

I citati ripostigli di San Cesario e Ganaceto in provincia di Modena, assieme a quello trovato nel 1820 presso Parma¹⁷, documentano abbastanza chiaramente la situazione della circolazione monetale alla fine del III-inizi II secolo a.C.

A San Cesario è venuto alla luce un gruzzolo di monete composto da un bronsetto coniato di Ariminum¹⁸, una dramma d'imitazione massaliota, quattro oboli gallici, da un vittoriato con simbolo e da un semisse definito onciale dal Cavedoni.

È importante notare la circolazione associata del bronzo onciale e del vittoriato che, ripeto, sono le prime monete ad ottenere una buona diffusione nel territorio emiliano-romagnolo.

Anche il ritrovamento del 1844 in località Ganaceto, pur provenendo da una sepoltura, sembra verosimilmente riflettere la circolazione quotidiana della prima metà del II secolo a.C.¹⁹. Da notare l'assenza di denari in questo nucleo interamente costituito da numerario romano.

La circolazione associata di bronzo onciale e vittoriato sembra quindi aver preceduto la diffusione capillare del denario in età precedente ed in parte contemporanea alla definitiva sistemazione della via Emilia²⁰.

¹³ C. CAVEDONI, *Ragguaglio storico archeologico de' precipui ripostigli antichi di medaglie consolari di famiglie romane*, Modena, 1854, p. 25-30.

¹⁴ ID., *Scavi. Modena*, in *Bullettino dell'Istituto di Corrispondenza Archeologica* (= *BICA*), 1834, p. 199-200.

¹⁵ A. NEGRIOLI, *Tesoretto di monete repubblicane d'argento scoperte davanti al Palazzo Vescovile*, in *NotScavAnt*, 1916, p. 159-163.

¹⁶ C. CAVEDONI, *Scavi di Modena e Reggio*, in *BICA*, 1844, p. 180.

¹⁷ *AMIIN*, 2, 1915, p. 195.

¹⁸ Per le monete provenienti dal territorio di Rimini si veda: E. ERCOLANI COCCHI, *Il materiale numismatico dell'età antica*, in *Analisi di Rimini antica: storia ed archeologia per un museo*; Rimini, 1980, p. 211-223.

¹⁹ M.T. GULINELLI, *op. cit.*, Modena, 1986, p. 88.

²⁰ E. ERCOLANI COCCHI, *La circolazione monetale in Emilia Romagna fra la fine del III e il I secolo a.C.*, in *BollNum*, suppl. al n° 4, *Studi per L.Breglia*, II, 1987, p. 24.

A partire dalla metà del II secolo si registra invece una diffusione abbondante del denario che si intensifica enormemente nel corso del I secolo a.C.

I denari recuperati, sia sporadicamente che in gruzzolo, rappresentano indubbiamente il numerario repubblicano più abbondante rinvenuto nella regione.

I denari sporadici

L'esame dei rinvenimenti sporadici, che generalmente offre dati più sicuri sulla circolazione effettiva di una moneta, conferma la diffusione del denario a partire dalla metà del II secolo e mostra un intensificarsi della circolazione della moneta d'argento nel corso del I secolo a.C.²¹

Osservando la figura 2 si può notare la completa assenza di denari nel settore Nord-orientale della regione; il territorio ferrarese non è caratterizzato infatti da quelle peculiarità monetali verificabili nel resto dell'Emilia Romagna, in quanto quest'area rientra nel più ampio quadro del settore deltizio del Po²².

I denari più antichi, cioè quelli appartenenti alle serie definite «anonime», sono documentati in numero non rilevante.

La maggioranza dei ritrovamenti sporadici di denari riguarda invece emissioni della seconda metà del II e del I secolo a.C., il che può essere indizio di un intensificarsi della circolazione della moneta d'argento proprio in questo periodo.

Una delle aree maggiormente interessate è quella del modenese e, anche stavolta, i ritrovamenti si distribuiscono maggiormente in prossimità della via Emilia e presso i valichi montani lungo il confine meridionale della regione.

Da ciò possiamo evincere che l'intensificarsi della circolazione monetale in Emilia Romagna corrisponde ad una più stabile presenza dell'elemento romano nel territorio regionale.

L'accresciuta diffusione del denario verso la fine del II secolo e nel corso del I secolo a.C. è comunque riscontrabile anche dall'analisi del fenomeno della tesaurizzazione.



Fig. 2. Denari sporadici di età repubblicana.

²¹ ID., *op. cit.*, 1987, p. 29 e sgg.; ID., *La moneta come fonte per la storia del territorio ravennate*, in *Storia di Ravenna, I. L'Evo Antico*, Ravenna, 1990, p. 367.

²² Per la monetazione di età repubblicana relativa al territorio ferrarese si veda: ID., *L'Aes Grave da Comacchio e la Drama Massaliota*, in *La Monetazione Antica nel Delta del Po: produzione e scambi*, Ferrara, 1986, p. 29-31; ID., *Assi repubblicani nel territorio (l'asse di Sesto Pompeo)*, in *La Monetazione Antica nel Delta del Po: produzione e scambi*, Ferrara, 1986, p. 44-45; ID., *I rinvenimenti monetali nei riflessi della storia e dell'economia del territorio ferrarese*, in *Storia di Ferrara, III, L'Età Antica (II) IV a.C.-VI d.C.*, Ferrara, 1990, p. 272-293 e bibliografia ivi citata.

I ripostigli

Negli ultimi decenni della Repubblica si verificano tutte quelle condizioni storiche che favoriscono sia la tesaurizzazione, cioè l'accumulo di moneta senza fini di immediato investimento, sia l'affrettato occultamento di somme di denaro.

Questo periodo storico è caratterizzato da una forte instabilità sociale e politica che porterà presto alla crisi del sistema repubblicano.

Anche se non tutti gli eventi storici avvenuti nel corso del I secolo a.C. coinvolgono direttamente l'Emilia Romagna, tuttavia contribuiscono sicuramente a creare nella regione un senso di timore, di incertezza, di instabilità non solo politica ma anche economica e sociale.

Nel territorio emiliano-romagnolo, oltre al verificarsi delle condizioni storiche che hanno favorito la tesaurizzazione, si è sviluppata, proprio grazie all'ormai completo inserimento della regione nel tessuto economico romano e alla fitta rete di scambi commerciali soprattutto con le zone del centro Italia, una vasta circolazione monetaria che ha permesso la raccolta, in alcuni casi, di migliaia di pezzi²³.

Facendo un calcolo approssimativo dei denari ritrovati in ripostigli del I secolo a.C. si supera abbondantemente la somma di 27.000.

Questa cifra che, limitandosi esclusivamente all'analisi del *Roman Republican Coin Hoards* del Crawford, non trova confronti, ci induce a ritenere che l'Emilia Romagna rappresenti, con molta probabilità, la regione che, rispetto a tutte le altre del territorio italiano, possiede la somma più alta di denari repubblicani recuperati in gruzzolo²⁴.

Comunque benché i grossi depositi di tesaurizzazione compaiono soltanto nel primo secolo a.C., la loro composizione riunisce serie monetali che sono state in circolazione anche in età precedente.

Come i denari rinvenuti isolati, così anche i ritrovamenti di gruzzoli si concentrano soprattutto lungo la principale arteria di comunicazione della regione e cioè la via Emilia. Non mancano comunque gruzzoli nascosti in zone più interne del territorio regionale ma sempre nei pressi di direttrici di traffico. Queste infatti erano punti favorevoli alla diffusione della moneta e nello stesso tempo consentivano il passaggio di eserciti o persone in fuga.

Le date dell'occultamento di queste somme di denaro, ricavabili approssimativamente dagli esemplari più recenti in esse contenuti, corrispondono a volte ad un evento brusco, drammatico come ad esempio una battaglia. Non bisogna comunque cercare ad ogni costo una corrispondenza cronologica tra precisi eventi storici e la data del nascondimento del gruzzolo, si deve piuttosto considerare il generale clima di instabilità sociale e politica durante il quale tali occultamenti avvengono.

Sulla base degli esemplari più recenti contenuti nei gruzzoli e tentando di schematizzarne lo studio, è stato possibile individuare, per i gruzzoli stessi, tre fasce cronologiche principali (si veda Fig. 3, 4, 5): la prima va dal 100 al 79 a.C., la seconda dal 76 al 62 e la terza dal 49 a.C. raggiunge gli ultimi anni della Repubblica.

Da notare che la prima e la terza fascia cronologica, corrispondenti agli anni di maggiore instabilità politica, sono quelle che contengono il maggior numero di ripostigli²⁵.

²³ ID., *op. cit.*, Bologna, 1976, p. 204.

²⁴ Il calcolo del quantitativo di denari trovati in ripostigli nelle diverse regioni italiane è stato realizzato solo sulla base dell'opera del Crawford; questo dato è quindi soggetto a revisione.

²⁵ Nei tre schemi di distribuzione cronologica (Figg. 3-4-5) non è stato inserito il deposito recuperato presso Piacenza nel 1842. A causa della rapida scomparsa di gran parte delle monete costituenti il ripostiglio, è impossibile stabilire quali fossero le emissioni più recenti ed ipotizzare quindi una eventuale data di occultamento del gruzzolo stesso. In *BICA*, 1842, p. 147-148, M. Lopez dice: «...nel lavorare un campo trovarono un ampio vaso di terra contenente danari di famiglie romane. ...ne potei avere se non sessanta di ottocento e più che fossero». Secondo il Lopez, tra le monete da lui esaminate, il denario più recente era quello di M. Sergio Silo interpretabile, molto probabilmente, come *RRC*, p. 302, n° 286 del 116 o 115 a.C.

Nel comune di Vigatto ai primi di febbraio del 1942 «...nel rivoltare il terreno con l'aratro...» furono trovati 25 denari repubblicani ed una moneta di Domiziano. Potrebbe forse trattarsi di un ripostiglio solo parzialmente recuperato. I denari sono interpretabili come: *RRC*, 206: 150 a.C.;

Anche da un punto di vista della distribuzione topografica i gruzzoli si prestano ad una schematizzazione (si veda Fig. 6): nelle prime due fasce cronologiche questi si distribuiscono principalmente tra Bologna e Cesena (l'unico ritrovamento a Nord del capoluogo regionale, fino ad oggi, è quello di Castel San Giovanni in provincia di Piacenza), nella terza fascia il territorio maggiormente interessato è quello tra il bolognese e Parma (con l'eccezione di Pieve Quinta in provincia di Forlì).



Fig. 6. Ripostigli del I sec. a.C.

L'enorme numero di denari ritrovati evidenzia, come già detto, che nella seconda metà del II secolo e durante il I secolo a.C., si era ormai sviluppata una vasta circolazione della moneta utilizzata sia come strumento di pagamento che come mezzo di capitalizzazione. Ricordo a tal proposito anche la forte domanda di ingenti somme di denaro da destinarsi al pagamento delle truppe militari particolarmente attive proprio nell'ultimo secolo della Repubblica.

La Prof.ssa E. Ercolani Cocchi ha realizzato una serie di grafici di distribuzione cronologica e quantitativa degli esemplari contenuti in alcuni ripostigli trovati in Emilia Romagna²⁶. Proprio l'analisi di questo tipo di indagine ha fornito ottimi risultati dimostrando come alcuni gruzzoli rappresentino un'immagine abbastanza fedele della circolazione, non solo nella regione presa in esame, ma nel più ampio quadro dell'Italia centro-settentrionale²⁷.

Si è notato inoltre, indipendentemente dalla data di chiusura dei gruzzoli, una presenza di denari costante e continua a partire dagli anni immediatamente precedenti la metà del II secolo a.C. Questo dato, avvalorato anche dai rinvenimenti sporadici, testimonia appunto una maggiore diffusione della moneta d'argento dalla metà del II secolo a.C., favorita sia da eventi politici che da ragioni di carattere economico-commerciale.

RRC, 218 : 147 a.C.; RRC, 222 : 143 a.C.; RRC, 231 : 138 a.C. (3 esemplari); RRC, 236 : 137 a.C. (3 es.); RRC, 248 : 133 a.C.; RRC, 254 : 131 a.C.; RRC, 275 : 123 a.C.; RRC, 276 : 122 a.C.; RRC, 282 : 118 a.C.; RRC, 337/3 : 91 a.C. (2 es.); RRC, 340 : 90 a.C.; RRC, 341 : 90 a.C.; RRC, 345 : 88 a.C.; RRC, 383 : 79 a.C.; RRC, 412 : 64 a.C.; RRC, 426/3 : 56 a.C.; RRC, 427/2 : 56 a.C.; RRC, 443 : 49-48 a.C.; RRC, 539 : 36 a.C. M. CORRADI CERVI, *Scavi di Parma e provincia degli anni 1941-1942*, in ASPP, 7-8, 1942-43, Parma, 1945, p. 182-183.

²⁶ E. ERCOLANI COCCHI, *op. cit.*, 1987, p. 19-37.

²⁷ ID., *op. cit.*, 1987, p. 29.

Ai grafici già realizzati aggiungerei quello del deposito trovato a Bologna intorno al 1886²⁸. (Si veda Fig. 7).

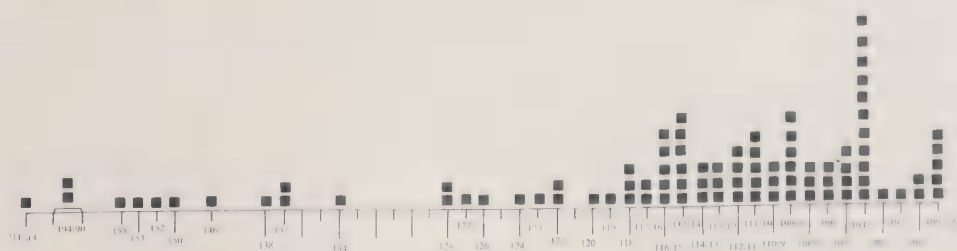


Fig. 7. Bologna 1886, via Indipendenza.

In questo gruzzolo c'è soltanto un denario anonimo; una situazione del genere riguarda anche gli altri depositi di questa prima fascia e delle fasce cronologiche successive, dove la presenza di denari anonimi (con le dovute eccezioni) è piuttosto limitata. Tutto ciò può essere indizio di una scarsa diffusione del denario prima della metà del II secolo a.C., teoria che trova conferma anche, come abbiamo visto, dall'analisi dei rinvenimenti sporadici.

Occorre comunque tener presente che il numero ridotto di ritrovamenti di denari della prima fase deve essere sicuramente anche legato sia al fatto che in quel periodo circolava un maggior quantitativo di moneta bronzea, espressione di un'economia ancora modesta a carattere esclusivamente agricolo, sia al graduale ritiro delle vecchie monete in seguito alle riduzioni ponderali.

I quinari

Con la lex Clodia il quinario prende il posto del vittoriato demonetizzato.

Nella regione Emilia Romagna sono stati recuperati tre ripostigli contenenti quinari. Il deposito di Roncofreddo ne conteneva 17²⁹, quello di Pieve Quinta 13³⁰ e quello di Borzano 514³¹.

L'occultamento di quest'ultimo, che associati ai quinari conta ben 597 denari, testimonia alla fine del I secolo a.C. una massiccia tesaurizzazione del quinario.

Da notare (si veda Fig. 8) che, come i denari sporadici, anche i ritrovamenti di quinari isolati si distribuiscono lungo o in prossimità della via Emilia o presso altre direttrici di traffico.

Concludendo vorrei sottolineare il fatto che i risultati a cui portano ricerche di questo tipo stimolano un maggiore approfondimento di un campo di studio così interessante. Inoltre tale indagine, facilmente applicabile ad altre zone sia dell'Italia che delle provincie romane, potrebbe contribuire ad accrescere ulteriormente le attuali conoscenze in materia economico monetaria.

Per quanto concerne lo specifico ambiente emiliano romagnolo concluderei dicendo che l'acquisizione di nuovi dati sui ritrovamenti monetari, il tentativo forse possibile di realizzare altri grafici di distribuzione cronologico-quantitativa di alcuni gruzzoli ritrovati

²⁸ E. BRIZIO, *Notizie e scoperte archeologiche*, in *AM(R)DSPPR*, s. III, vol. IV, Bologna, 1886, p. 217-221. «... per la via Indipendenza ... un muratore trovò un piccolo pentolino ripieno di monete consolari di argento.» Si trattava di più di 100 denari repubblicani, di cui 92 sono stati identificati, mentre una trentina circa erano irricognoscibili.

Il grafico di distribuzione cronologica e quantitativa degli esemplari presenti nel deposito di Bologna, è stato realizzato sulla base delle cronologie dedotte dal *Roman Republican Coinage* di M.H. CRAWFORD. (Non sono naturalmente comprese le monete indecifrabili).

²⁹ C. CAVEDONI, *op. cit.*, Modena, 1854, p. 25-30.

³⁰ A. SANTARELLI, *Notizie di un ripostiglio di denari consolari trovato a Pieve Quinta nel Forlivese*, Forlì, 1879; M. BAHRFELDT, *Der Denarschatz von Pieve-Quinta*, in *ZfN*, 10, 1883, p. 9-19.

³¹ ID., *Deux dépôts de deniers consulaires romains. II. Le dépôt de Borzano*, in *RBN*, 57, 1901, p. 143-166; L. BELLOCCHI AMOROSO, *Le monete romane repubblicane dei Civici Musei di Reggio Emilia*, Reggio Emilia, 1979, p. 21-28 e 33-34.

nell'800 ed il confronto con la situazione di altre regioni italiane, prime fra tutte quelle direttamente confinanti con l'Emilia Romagna, potrebbero sicuramente far progredire le conoscenze già acquisite.



Fig. 8. Quinari di età repubblicana.

APPENDICE A

| Anno | Località | D | Q | V | AE | Varie | Bibliografia |
|-----------|--------------------|--------|-----|-----|------|-----------|---|
| ■ c.1604 | Brescello | | | | | c. 15000A | RIN, 89, 1987, p. 43-68. |
| ■ 1714 | Brescello | | | | | 80000A | RIN, 89, 1987, p. 43-68. |
| • 1756 | Roncofreddo | alc | 17? | alc | | | RRCH, p. 103, n° 298. |
| • 1758 | Mont'Ovolo | c.41 | | | | | RRCH, p. 108, n° 333. |
| 1770-1965 | Ciano D'Enza | | | alc | | | N. GIORDANI, SDA, II, BO 1986, p. 138-139. |
| 1778 | Massa Finalese | | | | | | C. FRASSONI, Memorie, MO 1778, p. 2-3. |
| ■ 1810 | Cadriano | c.3000 | | | | | RRCH, p. 112, n° 357. |
| • 1812 | S. Cesario Panaro | c.4000 | | | | | RRCH, p. 112, n° 359. |
| • 1815 | Collecchio | c.1000 | | | | | RRCH, p. 117, n° 392. |
| • 1817 | S. Nicolò Villola | c.1000 | | | | | RRCH, p. 116, n° 389. |
| c.1819 | Velleia | | | | | 1 = | E.J. HAEBERLIN, Aes Grave, 1910, p. 142, n°1. |
| • 1820 | Panna | | | | alc• | | AMIIN, 2, 1915, p. 195. |
| • 1828 | Frascarolo | c.1100 | | | | | RRCH, p. 103, n° 302. |
| • 1831 | S. Anna | c.2000 | | | | | RRCH, p. 119, n° 407. |
| ■ 1831 | Castel S. Giovanni | c.100 | | | | | RRCH, p. 100, n° 277. |
| ■ 1832 | Montecodruzzo | c.5000 | | | | | RRCH, p. 96, n° 252. |
| • 1834 | S. Bartolomeo Sas. | 431 | | | | | RRCH, p. 118, n° 401. |
| • 1834 | S. Cesario Panaro | | | 1 | 1 = | 1° 4-1< | RRCH, p. 73, n° 111. |
| 1834-5 | Rimini | | | | | 2< | M. ZUFFA, Abitau, Imola 1970, p. 306. |
| c.1839 | Rimini e territ. | | | | | alc < | Studi Romagnoli, 13, 1962, p. 165-166. |
| • 1841 | Quaderna | c.53 | | | | | RRCH, p. 91, n° 217. |
| 1841 | Serravalle | 1 | | | | | A. CRESPELLANI, Scavi, 1878. |
| ■ 1842 | Piacenza | c.800 | | | | | BICA, 1842, p. 147-148. |
| 1844 | Ganaceto | | | 1 | 4• | | Inst. Corr. Arch., 1844, p. 180. |
| 1846 | Fossalta | | | | 1^ | | BICA, 1846, p. 31. |
| 1846 | Spilamberto | | | | 1• | | BICA, 1846, p. 34-35. |
| 1846 | Campegine | | | | | | BICA, 1846, p. 37. |
| 1858 | San Cesario | | | | | 1A | BICA, 1858, p. 159. |
| c.1861 | Montaletto | | | | | | E. ERCOLANI COCCHI, CARB, 1976, p. 205 [18]. |

| Anno | Località | D | Q | V | AE | Vanc | Bibliografia |
|-----------|--------------------|--------|-----|---|-------|------|--|
| 1862 | Fiume Reno | 1 | | | | | AM(R)DSPPR, II, fasc. I, 1863, p. 15-16. |
| * 1863 | Vigatto | c.141 | | | | | RRCH, p. 120, n° 416. |
| 1866 | Prada | 2 | | | alc° | | BICA, 1869, p. 211. |
| 1869 | Monte Mauro | | | | 1+1° | | V. RIGHINI CANTELLI, <i>Un museo</i> , BO 1980, 229. |
| 1869 | Rimini | | | | | 20< | Studi Romagnoli, 13, 1962, p. 167. |
| 1870 | Magreta | | | | | | C. CAVEDONI, <i>Marmi modenesi</i> , MO 1828, p. 58. |
| 1875 | Collegara | | | | 1° | | I. CHIESI, in Modena, MO 1989, p. 137. |
| 1877-9 | Collegara | | | | alc° | | A. CRESPELLANI, <i>Scavi</i> , 1879, p. 20. |
| 1878 | Pideura | 1 | | | | | E. ERCOLANI COCCHI, <i>CARB</i> , 1976, p. 207 [39]. |
| * 1879 | Pieve Quinta | 839 | 1 | | | | RRCH, p. 121, n° 421. |
| 1880 | Gorzano | | | | 1° | | A. CRESPELLANI, <i>Scavi</i> , 1880, MO 1882, p. 3-4. |
| 1880 | Modena | 1 | | | | | A. CRESPELLANI, <i>Scavi</i> , 1880, MO1882, p. 6. |
| 1881 | Savignano Panaro | 3 | | | | | A. CRESPELLANI, <i>Scavi</i> , 1881, MO 1883, p. 11-12. |
| 1881 | Monte Cimone | | | | 1+1° | | A. CRESPELLANI, <i>Scavi</i> , 1889, p. 11-12. |
| 1882 | Monte Cimone | 1 | | | | | A. CRESPELLANI, <i>Scavi</i> , 1889, p. 11-12. |
| 1882 | Quaderna | | | | | | AM(R)DSPPR, s.III, v.I, BO 1883, p. 248. |
| 1882 | Galeata | alc | | | | | NSc, 1943, p. 211. |
| 1882 | Savignano Panaro | 1 | | | 1° | | A. CRESPELLANI, <i>Scavi</i> , 1882, MO 1885, p. 12-13. |
| 1882 | Zenzano | | | | 1° 1° | | A. CRESPELLANI, <i>Scavi</i> , 1882, MO 1885, p. 17. |
| * 1883 | Baiso | c. 400 | | | | | A. CRESPELLANI, AA(RR)DSPPM, 1885, p. 285. |
| * 1882 | San Lazzaro | | | | | 15A | RRCH, p. 134, n° 504. |
| 1884 | Ariano | | | | 1° | | A. CRESPELLANI, <i>Scavi</i> , 1884, p. 9. |
| * 1884 | San Varano | 61 | | | | | RRCH, p. 99, n° 271. |
| 1884 | Borghetto | | | | | | NSc, 1884, p. 417-418. |
| 1884 | Borghetto | alc | | | 4+1+ | | NSc, 1884, p. 181. |
| 1884 | Forlimpopoli | | | | 1° | | NSc, 1884, p. 36. |
| c.1885 | Gaggio Montano | 1 | | | | | A. CRESPELLANI, <i>Scavi</i> , 1885, p. 20. |
| c.1885 | Modena | | | | | 1° | M.H. CRAWFORD, <i>Coinage & Money</i> , 1985, p. 58. |
| 1885 | Campiglio | | 1 | | | | A. CRESPELLANI, <i>Scavi</i> , 1885, p. 14. |
| 1885 | Forlì | | | | 1+ | | NSc, 1885, p. 13. |
| * c.1886 | Bologna | c.132 | | | | | AM(R)DSPPR, s.III, v.IV, 1886, p. 217-221. |
| 1886 | Bologna | | | | 1° | | A.M. BRIZZOLARA, in <i>Studi sulla città antica</i> , RM 1983, p. 238. |
| 1886 | Marano Panaro | | | | | | A. CRESPELLANI, AMDSPPM, s.III, 4, 1886, p. 491-495. |
| 1887-8 | Bologna | 1 | | | 13° | | NSc, 1889, p. 292. |
| 1891 | Marano Panaro | | | | 1° | | A. CRESPELLANI, AMDSPPM, s.IV, v.II, 1892, p. 270. |
| 1891 | Savignano Panaro | 1 | | | 4° | | A. CRESPELLANI, AMDSPPM, s.IV, v.II, 1892. |
| * 1891 | Borzano | 597 | 514 | | | | L. BELLOCCHI AMOROSO, <i>Le monete</i> , RE, 1979, p. 21ss. |
| 1892 | Quaderna | 9 | 4 | 1 | | | NSc, 1892, p. 145. |
| 1892-3 | Castelvetro Mod. | | | | 1° | | A. CRESPELLANI, AMRDSPPM, s. IV, 6-7, 1894, p. 249-250. |
| 1894-5 | Savignano Panaro | | | | | | AM(R)DSPPM, s.IV, v.III, 1897, p. XXIX. |
| 1894-5 | S. Maria Maddalena | | | | | | E. ERCOLANI COCCHI, <i>CARB</i> , 1976, p. 207 [37]. |
| 1894-5 | Villa Bianca | 1 | | | 1° | | A. CRESPELLANI, AMDSPPM, s.IV, v.VIII, 1897, p. 225. |
| 1895 | Faenza | 3 | | | | | E. ERCOLANI COCCHI, <i>CARB</i> , 1976, p. 206 [32]. |
| 1895 | Savignano Panaro | 2 | | | | | A. CRESPELLANI, AM(R)DSPPM, s. IV, v.VIII, 1897, p. 288. |
| 1896 | San Fortunato | | 1 | | | | NSc, 1896, p. 64. |
| 1898 | Poggioli | 1 | | | | | A. CRESPELLANI, AMDSPPM, s.V, v.I, 1900, p. 272-274. |
| * 1899 | Carpina | 53 | | 5 | 1° | | NSc, 1899, p. 126-127. |
| 1904 | Rimini | | | | | 1° | E.J. HAEBERLIN, <i>Aes Grave</i> , 1910, p. 58, n°79. |
| c.1908 | Marzabotto | | | | alc° | | RIN, 83, 1981, p. 253-254. |
| * 1909/13 | Villa Inferno | 46 | | | | | RRCH, p. 96, n° 247. |

| Anno | Località | D | Q | V | AE | Varie | Bibliografia |
|-----------|----------------------|------|---|----|-------|---------|--|
| 1911 | Grizzana | 2 | 1 | | | | <i>NSC</i> , 1913, p. 325-327. |
| ■ 1913 | Imola | 532 | | 12 | | | <i>RRCH</i> , p. 90, n° 210. |
| 1913 | Cuffiano | | | | 1* | | <i>NSc</i> , 1913, p. 202-204. |
| c.1924 | Baggiovara | 1 | | | | | I. CHIESI, in <i>Modena dalle origini</i> , MO 1989, p. 138. |
| 1927 | Bologna | | | | | 2 « | <i>StEtr</i> , 22, 1952-53, p. 227. |
| ■ c.1928 | Comacchio | | | | | 4 = | <i>RRCH</i> , p. 47, n° 25. |
| ■ 1929 | Ravenna | 1 | | 1 | 35 « | | <i>RRCH</i> , p. 135, n° 514. |
| 1931 | San Biagio | | | | alc « | | E. ERCOLANI COCCHI, <i>CARB</i> , 1976, p. 207 [36]. |
| 1933 | S. Giuliano Mare | | | | 6 « | | E. ERCOLANI COCCHI, Rimini, 1980, p. 220-221. |
| ■ 1933 | Cavriago | | | | | 7A | <i>RRCH</i> , p. 117, n° 394. |
| 1936 | Freto | 1 | | | | | I. CHIESI, in <i>Modena dalle origini</i> , MO 1989, p. 138. |
| *? 1942 | Vigatto | 25 | | | | | <i>ASPP</i> , 7-8, 1942-43, PR 1945, p. 182-183. |
| 1950 | San Michele | | | | 2 « | | E. ERCOLANI COCCHI, Rimini, 1980, p. 220-221. |
| 1954 | Torre S. Polo | 2 | | | | | <i>ASPP</i> , VI, 1954, PR 1955, p. 42-43. |
| 1955 | Anzola Emilia | | | | 1^ | | <i>AIIN</i> , 5-6, 1959, p. 267. |
| 1956 | Panna | 1 | | | | | <i>NSc</i> , 1957, p. 249. |
| 1958 | Reggio Emilia | | | | 2+ | | <i>NSc</i> , 1960, p. 262. |
| 1958 | Velleia | | | | | | FA, XIII, 1958, p. 341, n° 5416. |
| 1958 | Pianetto | 1 | | 1 | | | <i>Studi Romagnoli</i> , 10, 1959, p. 68. |
| ■ c.1961 | Vigatto | 742 | | | | | <i>RRCH</i> , p. 130, n° 475. |
| 1961 | Rimini | | | | 3 « | | E. ERCOLANI COCCHI, Rimini, 1980, p. 220-221. |
| 1961 | Rimini | | | | | 1 = 1 < | <i>Studi Romagnoli</i> , 13, 1962, p. 92 e 166. |
| 1962 | Bagno Romagna | | | 2 | 3 « | | <i>NSc</i> , 1961, p. 240-248. |
| 1962-63 | Rimini | | | 1 | | | <i>AMDSPPR</i> , 1969, BO 1970, p. 318-319. |
| 1963 | Rimini | | | | 7 « | | E. ERCOLANI COCCHI, Rimini, 1980, p. 220-221. |
| ■ 1963 | Cesena | c.40 | | | | | ERCOLANI, in <i>Storia di Cesena I</i> , Rimini, 1982, p. 171-184. |
| 1964 | Rimini | | | | 1 « | | <i>Studi Romagnoli</i> , 13, 1962, p. 96-97. |
| 1964 | Modena | | | | | 1 v | <i>AMDSPAPM</i> , s.X, v.II, 1967, p. 223. |
| 1964 | Rimini | 1 | | 1 | 1 « | 1: | E. ERCOLANI COCCHI, Rimini, 1980, p. 220-221. |
| 1966 | Cattolica | | | | 1 « | | M.TABANELLI, in <i>QARCBA</i> , 1980, p. 53-54. |
| 1968 | Ravenna | | | | 1 « | | E. ERCOLANI COCCHI, <i>CARB</i> , 1976, p. 203 [1]. |
| 1969 | Covignano | | | | | 2 < | <i>AIIN</i> , 16-17, 1969-70, p. 292. |
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* = ripostigli; D = denari; Q = quinari; V = vittoriati; A = aurei; a = monete greche; « = altri bronzi; ° = dramme massaliote; = = serie latine; < = monete di Anriminum; ^ = assi sestantari; • = assi onciali; = = semissi onciali; + = assi semionciali; - = oboli gallici; : = monete romano-campane; v = varie; alc = alcuni.

Prima fascia (100-79 a.C.)

| luogo e data ritrovamento | | consistenza | emissioni più recenti | |
|---------------------------|-----------|---|-----------------------|------------------|
| IMOLA | 1913 | 532 denari 12 vittoriati | 100 <i>BMCRR</i> ; | 100 <i>RRC</i> |
| BOLOGNA | 1886 | c. 132 denari | 89 <i>BMCRR</i> ; | 100 <i>RRC</i> |
| QUADERNA | 1841 | almeno 52 denari | 89 <i>BMCRR</i> ; | 92 <i>RRC</i> |
| CARPENA | 1899 | 1 asse onciale 5 vittoriati 53 denari | 89 <i>BMCRR</i> ; | 92 <i>RRC</i> |
| VILLA INFERNO | 1909/1913 | 46 denari | 83 <i>BMCRR</i> ; | 82 <i>RRC</i> |
| CESENA | 1963 | c. 40 denari | 82 <i>BMCRR</i> ; | 82 <i>RRC</i> |
| MONTECODRUZZO | 1832 | c.4734 denari | 82-80 <i>BMCRR</i> ; | 82-81 <i>RRC</i> |
| SAN VARANO | 1884 | 61 denari | 81 <i>BMCRR</i> ; | 79 <i>RRC</i> |
| CASTEL S. GIOVANNI | 1831 | c. 100 denari | 80 <i>BMCRR</i> ; | 79 <i>RRC</i> |



Fig. 3.

Seconda fascia (76-62 a.C.).

| luogo e data ritrovamento | | consistenza | emissioni più recenti | |
|---------------------------|------|---|-----------------------|-----------|
| FRASCAROLO | 1828 | c. 1100 denari | 76-72 BMCRR; | 76-75 RRC |
| RONCOFREDDO | 1756 | c. 6000 vittoriati denari quinari | 76-72 BMCRR; | 76-75 RRC |
| MONTOVOLO | 1758 | c. 41 denari | 71 BMCRR; | 62 RRC |



Fig. 4.

Terza fascia (49 a.C.-fino alla fine della Repubblica).

| luogo e data ritrovamento | | consistenza | emissioni più recenti | |
|---------------------------|------|--|-----------------------|------------------|
| CADRIANO | 1810 | c. 80000 monete tra cui 3000 denari | 50-49 <i>BMCRR</i> ; | 49-48 <i>RRC</i> |
| S. CESARIO | 1812 | c. 4000 denari | 50-49 <i>BMCRR</i> ; | 49-48 <i>RRC</i> |
| COLLECCHIO | 1815 | c. 1000 denari | 47 <i>BMCRR</i> ; | 45 <i>RRC</i> |
| S. NICCOLO' DI VIL. | 1817 | c. 1000 denari | 46 <i>BMCRR</i> ; | 45 <i>RRC</i> |
| CAVRIAGO | 1933 | 7 aurei | 45 <i>BMCRR</i> ; | 45 <i>RRC</i> |
| S. BARTOLOMEO IN S. | 1834 | 431 denari | 40 <i>BMCRR</i> ; | 43 <i>RRC</i> |
| VIGATTO | 1863 | oltre 141 denari | 39 <i>BMCRR</i> ; | 42 <i>RRC</i> |
| PIEVE QUINTA | 1879 | 839 denari 1 quinario | 38 <i>BMCRR</i> ; | 42 <i>RRC</i> |
| SANT'ANNA | 1831 | c. 2000 denari | 38 <i>BMCRR</i> ; | 42 <i>RRC</i> |
| BORZANO | 1891 | 597 denari 514 quinari | 38 <i>BMCRR</i> ; | 42 <i>RRC</i> |
| BRESCELLO | 1604 | c. 15000 aurei | età cesariana | |
| BRESCELLO | 1714 | c. 80000 aurei | 38 <i>BMCRR</i> ; | 38 <i>RRC</i> |
| VIGATTO | 1961 | 742 denari | 32-31 <i>BMCRR</i> ; | 32 <i>RRC</i> |
| BAISO | 1883 | c.400 denari | tra Repubbl. | ed Impero. |



Fig. 5.

Les trouvailles monétaires de Monte Iato (Sicile) et les monnaies du magistrat Lucius Metellus émises à *Panormos* et à *Iaitas*

Suzanne FREY-KUPPER*

Dans une récente contribution consacrée à la circulation monétaire de Monte Iato sous domination romaine jusqu'à l'époque tibérienne, j'ai comparé la répartition quantitative des monnaies de bronze des différents ateliers représentés à Monte Iato à celle d'autres sites de Sicile¹. Les résultats de cette recherche² serviront de point départ à la présente contribution. Celle-ci a pour sujet les relations entre les monnayages de *Panormos* et de *Iaitas*.

La circulation monétaire à Monte Iato : Quelques remarques

Depuis 1971, l'Institut archéologique de l'Université de Zurich mène des fouilles à Monte Iato³. Le site se trouve à quelque 35 km au sud-ouest de Palerme. Sur le replat de la montagne se trouvait l'antique ville de *Iaitas*. Jusqu'en 1991, on comptait 2084 trouvailles monétaires à Monte Iato. Presque un tiers de toutes les monnaies antiques⁴ provient d'ateliers siciliens qui ont frappé sous domination romaine. Il s'agit exclusivement de pièces d'airain.

La récente évaluation des quantités des monnaies frappées pendant la période qui s'étend de la deuxième guerre punique jusqu'à Tibère a révélé une circulation de caractère local. En effet, les pièces issues d'ateliers siciliens couvrent presque 85% de toutes les monnaies de bronze⁵ :

| Sicile | | Italie | |
|-----------------------------------|-------|--------------------|-------|
| <i>Panormos</i> | 43,2% | Rhegion | 2,7% |
| <i>Iaitas</i> | 15,5% | | |
| Sicile occidentale, autres villes | 10,0% | | |
| <hr/> | | <hr/> | |
| Mamertins | 10,4% | République romaine | 15,5% |
| Sicile orientale, autres villes | 2,7% | | |

*

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Mes remerciements vont à H.-P. Isler, Zurich, qui m'a confié l'étude des trouvailles monétaires de Monte Iato, ainsi qu'à M. Amandry, Paris; H. Bloesch, Winterthur; C. di Stefano, Palerme; L. Gandolfo, Palerme; D. Gerin, Paris; A. Mini, Palerme; H.-D. Schultz, Berlin; A. Villa, Palerme; H. Voegli, Bâle et à H.-M. von Kaenel, Winterthur pour les renseignements et moulages fournis. Les photos ont été prises par S. Hertig, Zurich, les moulages de Palerme faits par H. Bloesch.

¹ S. FREY-KUPPER, *La circulation monétaire en Sicile sous domination romaine : L'airain de Panormos et de Iaitas*, dans PACT, 35, *Vie et survie des monnaies antiques. Actes du symposium européen tenu à Ravello, octobre 1990*, éd. par T. HACKENS - Gh. MOUCHARTE, (sous presse).

² Cf. aussi ma contribution *La circolazione monetaria a Monte Iato dall'inizio della dominazione romana fino all'età tiberiana* présentée à l'occasion des *Giornate internazionali di studi sull'area Elima, Gibellina, 19-22 septembre 1991*, à paraître en 1992 dans les *AnnaliSNSPisa*.

³ Les rapports annuels des fouilles sont publiés dans les revues *Sicilia Arch* et *AK*, tout dernièrement dans *Sicilia Arch*, 23, 1990, p. 7-27 et *AK*, 34, 1991, p. 66-72. La collection des *Studia Ietina (StIet)* est consacrée à la publication d'études particulières sur le site. Les quatre premiers volumes (I, 1976 : Cariatides du théâtre; tuiles; notes à l'usage des restaurateurs; II, 1984 : Le temple d'Aphrodite; céramique de l'habitat médiéval; III, 1991 : L'agora; IV, 1991 : Céramique à vernis noir) sont parus. Pour une bibliographie complète sur Monte Iato cf. H.P. ISLER, *Monte Iato, guida archeologica*, Palerme, 1991, p. 91-94.

⁴ Elles représentent environ 70% des trouvailles numismatiques. Le reste comprend surtout des pièces médiévales.

⁵ Le tableau résume de manière succincte les données présentées et commentées dans notre étude mentionnée ci-dessus, note 1.

Les monnaies provenant de la Sicile occidentale sont les plus nombreuses, particulièrement celles de *Panormos* (43,2%). Les émissions de l'atelier de *Iaitas* même sont également bien représentées. Avec 15,5%, elles sont au même nombre que les bronzes romains. Le pourcentage des monnaies émises par les autres villes de Sicile occidentale est faible (10%)⁶.

L'ensemble des monnaies de la partie orientale de l'île (13,1%) est dominé par les monnaies des Mamertins (10%)⁷. Les monnaies des autres ateliers de la Sicile orientale sont rares (2,7%)⁸.

La distribution géographique des ateliers des monnaies découvertes à Monte Iato suggère une circulation de caractère local. À part les monnaies des Mamertins et quelques rares pièces de Catane et de Syracuse, la quasi totalité du matériel numismatique provient de la Sicile occidentale.

Quelles sont les raisons pour la quantité impressionnante de monnaies panormitaines à Monte Iato ? Quels sont les rapports entre les deux villes ? Il n'est pas possible dans le cadre de cette contribution de répondre de manière détaillée à toutes les questions. L'étude approfondie des monnaies elles-mêmes permettra cependant d'éclaircir la problématique. J'aimerais montrer ceci à l'aide d'un exemple précis.

Le début du monnayage sous domination romaine à Panormos

Plus d'un tiers de toutes les pièces panormitaines (37,3%) de Monte Iato appartient au type «tête de Zeus / guerrier avec nom de magistrat» (Fig. 1-4.7)⁹. Ce sont 16% par rapport au total du numéraire en circulation pendant la période de la deuxième guerre punique jusqu'à Tibère. Les pièces au guerrier de *Panormos* sont les monnaies les plus nombreuses parmi les trouvailles de Monte Iato.

Grâce à son association à des monnaies de la République romaine dans le trésor de Bisacquino, le début de la frappe de ce type monétaire peut être daté de la première moitié du II^e s. av. J.-C.¹⁰. Les monnaies au guerrier avec nom de magistrat sont les premières émissions de *Panormos* sous domination romaine. On ne trouve que des noms de magistrats romains.

En utilisant des critères stylistiques et métrologiques et en évaluant l'usure des pièces dans le trésor de Bisacquino, on peut distinguer deux séries du type au guerrier. Les pièces de la première série (Fig. 1-2) sont d'un style très soigné. Le relief et l'exécution des détails (p. ex. la manière de représenter les mèches) rappellent les monnaies émises peu avant et pendant la deuxième guerre punique¹¹.

⁶ Agrigente 5,1%, *Entella* 0,2%, Lilybée 1,5%, Ségeste 0,4%, Solonte 2,5% et *Thermai* 0,4%.

⁷ Il s'agit presque exclusivement de *pentonkia* de la deuxième guerre punique. Cf. M. SARSTRÖM, *A Study in the Coinage of the Mamertines*, Lund, 1940, p. 90-93, 101-103, 106, 108-109, 121-124 (les séries XIA-XIVA et XVIA).

⁸ *Aitnai* 0,2%, *Alaisa* 0,2%, *Alontion* 0,2%, *Catane* 0,2%, *Kentoripa* 0,6%, *Menai* 0,2%, *Syracuse* 0,9%, *Tauromenion* 0,2%.

⁹ E. GÀBRICI, *La monetazione del bronzo nella Sicilia antica*, Palerme, 1927, p. 158-159, n°199-223; M. BAHRFELDT, *Die römisch-sicilischen Münzen aus der Zeit der Republik*, dans *RSN*, 12, 1904, p. 384-407, n°42-57, pl. 2-3.

¹⁰ *JGCH* 2251; *RRCII*, p. 77, n°137; publié par A. TUSA CUTRONI, *Soprintendenza archeologica della Sicilia occidentale*, dans *AIIN*, 23-24, 1976-1977, p. 304-315, pl. 29-30. Pour cette datation cf. S. FREY-KUPPER, *Zur frühen Münzprägung Siziliens unter römischer Herrschaft : der Hort von Campobello di Licata*, dans *RSN*, 71, 1992, sp. 149-178. Cf. aussi ci-dessous, note 13.

¹¹ Par exemple les pièces des Mamertins (cf. M. SARSTRÖM, *op. cit.*, p. 121-124), les monnaies de Centuripe (cf. E. GÀBRICI, *op. cit.*, p. 125-126, n°4-7) et déjà les litres de Hiéron II de Syracuse (*ibid.*, p. 184-185, n°442-489).

Les monnaies de cette première série sont plus lourdes que celles de la deuxième¹². Chronologiquement elles précèdent les exemples de la deuxième série (Fig. 3-4.7)¹³ qui est caractérisée par un style médiocre et un poids d'environ 5,5 à 6,5 g. Seules les monnaies de la série récente portent le monogramme PA (composé des lettres Π, Α et Ρ), qui désigne ou bien la ville ou bien ses habitants.

Parmi les types monétaires du II^e s. av. J.-C. émis en Sicile orientale, on ne trouve, à ma connaissance, aucune série monétaire sur laquelle les noms de magistrats figurent en latin. En règle générale, ces monnaies portent l'*ethnikon* de la ville. Comment expliquer alors les noms de magistrats romains sur les monnaies de *Panormos* ?

L'ensemble des trouvailles monétaires de Monte Iato révèle que l'approvisionnement en petite monnaie était faible entre la première guerre punique et 212/211 av. J.-C. D'une part, le numéraire punique disparaît de la circulation après la première guerre punique; d'autre part, les villes de la Sicile occidentale, à l'exception d'Agrigente, ne frappent plus de monnaie¹⁴.

Ces observations m'amènent aux conclusions suivantes. Dès la fin de la première guerre punique, seulement très peu de petite monnaie arrive en Sicile occidentale. À la fin de la deuxième guerre punique, la Sicile occidentale souffre d'une véritable pénurie de petit numéraire. Rome réagit à cette situation en établissant des ateliers monétaires locaux. Une monnaie est installée à *Panormos*, une autre à Agrigente¹⁵. Les magistrats responsables signent les monnaies de leur nom. Ceci explique l'absence de l'*ethnikon* sur les monnaies d'Agrigente et sur celles de la première série du type au guerrier de *Panormos*. Par la suite, sur les monnaies de la deuxième série de *Panormos*, le nom du magistrat est accompagné du monogramme PA . L'apparition de cet *ethnikon* marquerait-elle le début d'une certaine indépendance de l'atelier panormitain de l'administration romaine ?

L'exemple des émissions du magistrat Lucius Metellus

Parmi les monnaies de *Iaitas* on trouve un type monétaire qui ressemble de manière frappante aux pièces panormitaines au guerrier du magistrat L.ME (Fig. 4.7)¹⁶. Il s'agit du type «tête de Zeus / Artémis» émis au nom des IAITINOI et signé par le magistrat L.M (Fig. 5-6.8-9)¹⁷. À mon avis, il s'agit dans les deux cas – L.ME sur les pièces de

¹² Le poids moyen varie selon le nom de magistrat et se situe autour de 7 à 8 g. Cette valeur approximative est calculée d'après les pièces rassemblées par M. Bahrfeldt, cf. ci-dessus note 9.

¹³ Dans le trésor de Bisacquino, on trouve cinq exemplaires de la première série très usés qui datent certainement de la première moitié du II^e s. av. J.-C. (cf. A. TUSA CUTRONI, *art. cit.*, p. 310, n°39-43). La plupart des pièces panormitaines de ce trésor appartiennent à la deuxième série et sont seulement peu usées (A. TUSA CUTRONI, *art. cit.*, p. 310-313, n°44-65). Pour celles-ci, une datation plus tardive, probablement du troisième quart du II^e s. av. J.-C., s'impose. Le trésor de Caccamo (Palermo, Museo Regionale G.E. 840, cf. A. TUSA CUTRONI, *Il medagliere del museo nazionale di Palermo*, dans *AION*, 3, 1956, p. 210), qui contient quatre pièces des monnaies au guerrier, ne fournit pas d'arguments contre cette datation.

¹⁴ En effet, presque toutes les pièces de Monte Iato datant de cette période proviennent de la Sicile orientale : On y trouve surtout des monnaies de Hiéron II et des pièces émises en Sicile occidentale par Rome et ses alliés, notamment les Mamertins. À ce propos et pour des détails cf. les notes 28 et 29 de notre contribution mentionnée ci-dessus, note 2.

¹⁵ Il s'agit des monnaies du type «tête de Janus / couronne avec nom de magistrat», E. GÀBRICI, *op. cit.* (note 9), p. 158, n°173-177 et 179-190; M. BAHRFELDT, *art. cit.* (note 9), p. 337-384, n°1-41, pl. 1-2. Ces monnaies attribuées jusqu'à maintenant à *Panormos* ou à Lilybée ont été frappées à Agrigente ou dans les environs de cette ville. Cf. mon étude consacrée à ce sujet, *art. cit.* note 10.

¹⁶ Les pièces de L.ME appartiennent à la deuxième série du type au guerrier; M. BAHRFELDT, *art. cit.* (note 9), p. 392-393, n°45.

¹⁷ H. BLOESCH, *La monetazione di Ietas*, dans *Kokalos*, 28-29, 1972-1973, p. 202, n°2, pl. 43, 2a.b.

Panormos et L.M sur celles de *Iaitas* – du même magistrat, probablement d'un Lucius Metellus¹⁸.

Les parallèles stylistiques des monnaies des deux villes sautent aux yeux. On remarque par exemple la forme carrée de la tête de Zeus ou l'exécution et l'ordre des détails, notamment des cheveux avec leurs boucles. Le nombre des feuilles du laurier est le même. Le grènetis est marqué par des gros points. Actuellement, j'arrive à distinguer au moins deux graveurs différents qui ont travaillé pour ce magistrat. Le premier se distingue par une tête de Zeus carrée et une Artémis mince entourée d'une légende fragile (Fig. 4-5.6 [dr.]). Les lettres et l'Artémis du deuxième graveur sont grosses et bien lisibles (Fig. 6 [rv.]. 7-9). La tête de Zeus est allongée. Parmi les exemplaires de *Iaitas*, on trouve des liaisons de coins entre les pièces des deux graveurs (Fig. 6).




Fig. 1. Palerme, Museo Regionale, de Monte Iato, M 1570, 6,42 g; 2. Palerme, Museo Regionale, de Monte Iato, M 1207, 7,48 g; 3. Bâle, Historisches Museum, 1908.729, 3,79 g; 4. Palerme, Museo Regionale, G.E. 2291, 5,52 g; 5. Palerme, Museo Regionale, G.E. 2291, 5,14 g; 6. Berlin, Staatliche Museen, 1990, 3,14 g; 7. Paris, Bibliothèque Nationale, Cabinet des Médailles ex Bouton, Z 3142 B45, 5,31 g; 8. Paris, Bibliothèque Nationale, Cabinet des Médailles, 604, 4,28 g; 9. Palerme, collezione Mini, n°5, 3,29 g.

Jusqu'à maintenant, je ne connais que deux coins de droit et trois de revers pour les monnaies de *Iaitas*. Ceci suggère une production très limitée. Un corpus systématique de toutes les pièces de *Panormos* est en train d'être constitué. Le nombre des coins des monnaies de *Panormos* semble beaucoup plus élevé que celui des pièces de *Iaitas*.

Au niveau technique, on trouve également des ressemblances entre les monnaies des deux villes. Les flans sont minces, les bords légèrement coniques. L'axe des coins semble être irrégulier.

¹⁸ Déjà H. BLOESCH, *art. cit.*, p. 203 et d'autres avant lui (M. BAHRFELDT, *art. cit.*, p. 393) ont rapproché les abréviations L.M et L.ME et les ont identifiées au même personnage, à Lucius Cecilius Metellus, *quaestor* de Verres. Selon les indications chronologiques du trésor de Bisacchino, cette identification ne peut être maintenue.

La comparaison du poids des monnaies de *Panormos* et de *Iaitas* pose des problèmes. Le poids moyen des 31 pièces panormitaines étudiées qui proviennent de collections et du trésor de Bisacquino est de 5,40 g¹⁹. Celui des neuf monnaies de *Iaitas* ne s'élève qu'à 3,77 g²⁰. On constate une différence moyenne de 1,62 g. Celle-ci correspond à un bon tiers du poids des monnaies de *Iaitas*.

C'est précisément à la lumière de la métrologie qu'on comprend les contremarques qui se trouvent sur la plupart des exemplaires du type monétaire de *Iaitas* (Fig. 5.9). Les contremarques ont la forme d'un monogramme : . Les lettres Π, Α et Ο dont il se compose s'expliquent aisément. Elles évoquent sans doute le nom de la ville de *Panormos*.

Les monnaies de *Iaitas*, qui se confondent – à la première vue – facilement avec celles de *Panormos* provoquaient certainement la méfiance à cause de leur poids. Par conséquent, la population les refusait. Ce n'est que grâce aux contremarques que ces monnaies sont intégrées dans la circulation. Le monogramme de *Panormos* qui apparaît sur les contremarques garantit une valeur équivalente à celle des monnaies de *Panormos* (qui, elles, portent un monogramme similaire).

Qui a frappé les monnaies des Iaitinoi ?

Ces quelques observations ont de quoi séduire numismates et historiens. Il reste cependant un bon nombre de questions ouvertes.

D'abord : Pourquoi une émission de monnaies à *Iaitas* ? La production de ces monnaies répond-elle à une véritable nécessité ? Les *Iaitinoi* voulaient-ils exprimer leur autonomie en frappant les monnaies ?

Contrairement aux monnaies au guerrier de *Panormos* – le type le plus nombreux à Monte Iato – les pièces du magistrat L.M de *Iaitas* n'ont jamais joué un rôle important dans la circulation monétaire de Monte Iato. Jusqu'à aujourd'hui, on en a trouvé que quatre pièces²¹ dont la première fut découverte lors de la dix-huitième campagne de fouilles seulement !

Ensuite : Comment s'organisait la frappe ? Quel était le rôle du magistrat romain, lequel des graveurs qui ont également travaillé pour *Panormos* ? Une chose est sûre : La ville de *Iaitas* devait mettre à disposition le métal pour la frappe. Le statut, la fonction et

19 L'écart-type est de 0,94 g. Pour le calcul, on a tenu compte des pièces suivantes : (a) 15 monnaies répertoriées par Bährfeldt, cf. M. BAHRFELDT, *art. cit.*, p. 392, n°45, 1-7.9-11.13-14 (Les numéros 8 et 12 sont des pièces frappés à *Iaitas* par le même magistrat!) et M. BAHRFELDT, *Die Römisch-Sizilischen Münzen aus der Zeit der Republik. Eine Nachlese*, dans *RSN*, 24, 1928, p. 231, n°15-17; (b) Deux pièces de Paris, Bibliothèque Nationale, Cabinet des Médailles, ex Delepierre (5,45 g) et ex Boutin n° inv. Z4142 B45 (6,68 g); (c) Neuf pièces conservées à Palerme (Museo Regionale) qui font partie des monnaies n° inv. G.E. 2291 (dit «tesoro di provenienza sconosciuta», A. TUSA CUTRONI, dans *AIIN*, 3, 1956, p. 210-211) : 7,40 g - 6,68 g - 5,84 g - 5,83 g - 5,81 g - 5,53 g - 5,52 g - 4,66 g - 4,60 g. Examen fait, il ne s'agit pas d'un trésor complet, mais d'un mélange de monnaies qui contient probablement une partie d'un trésor; (d) Cinq monnaies du trésor de Bisacquino : A. TUSA CUTRONI, dans *AIIN*, 23-24, 1976-1977, p. 312, n°57-61 : 7,32 g - 6,42 g - 5,01 g - 4,83 g - 4,42 g.

20 L'écart-type est de 0,67 g. Pour le calcul on a tenu compte des pièces suivantes : Palerme, Museo Regionale, n° inv. G.E. 2291 (5,14 g); Paris, Bibliothèque Nationale, Cabinet des Médailles, n° inv. 604 (4,28 g); Winterthur, Münzkabinett der Stadt Winterthur, n° inv. 821 (4,00 g; cf. H. BLOESCH, *Griechische Münzen in Winterthur*, Winterthur, 1987, p. 65, n°669a); collection privée, ex Mini (3,97 g); collection Mini, trois pièces (3,77 g et 3,29 g : cf. A. MINÌ, *Monete di bronzo della Sicilia antica*, Palerme, 1979, p. 251, n°5 et 5b; 3,70 g : non publiée); Berlin, Staatliche Museen, n° inv. 1900 (3,14 g); Bâle, Monnaies et médailles, S.A., stock 1988 (2,68 g).

21 Les n° inv. M 1801 (3,25 g), 1802 (3,86 g), 1881 (2,82 g) et 1882 (4,49 g). Toutes les pièces, sauf M 1801, sont contremarquées.

les compétences du magistrat Lucius Metellus n'apparaissent pas clairement. Cependant, si le même magistrat signe les monnaies de *Panormos* et de *Iaitas*, si les mêmes graveurs réalisent les coins des deux villes et si l'on sait que *Panormos* disposait des infrastructures pour le monnayage, on peut se poser la question si les monnaies de *Iaitas* ont vraiment été frappées à Monte Iato.

La différence de poids entre les monnaies de *Panormos* et celles de *Iaitas* pourrait également s'expliquer dans le cadre de la production. Si l'administration romaine, par l'intermédiaire de ses magistrats, était impliquée dans la production des monnaies de *Iaitas*, la différence de poids était probablement destinée à couvrir les frais de production²² et était en même temps une source de revenu pour Lucius Metellus.

Enfin : Pourquoi le volume d'émission du type de Monte Iato est-il si petit ? Il se peut que la production des monnaies était trop coûteuse pour *Iaitas*. De plus, on soupçonne que les monnaies de *Iaitas* – d'un poids inférieur à celles de *Panormos* – n'avaient malgré leurs contremarques pas beaucoup de succès auprès de leurs utilisateurs.

Pour conclure, j'aimerais revenir à la question initiale : La comparaison des monnaies de *Panormos* et de *Iaitas* permet-elle de voir sous un nouvel éclairage les rapports entre les deux villes ?

L'exemple des monnaies du magistrat Lucius Metellus est trop complexe pour tirer des conclusions simplistes au sujet des rapports entre les deux villes. Cependant, le fait que la production monétaire de *Iaitas* est intimement liée à celle de *Panormos* (même personnage qui signe les monnaies, mêmes graveurs qui réalisent les coins), voire qu'elle en dépend (différence de poids, contremarques) est tout au moins un indice pour une certaine influence économique – et probablement politique – de *Panormos* sur sa voisine de l'arrière-pays.

22 Je n'exclus pas un cas semblable à celui de la monnaie de Rome à l'époque de Claude. L'atelier de la capitale a mandaté des ateliers auxiliaires. Ceux-ci prélevaient un certain pourcentage du métal qui servait à couvrir les frais de production. Cf. H.-M. VON KAENEL, *Münzbildnis und Münzprägung des Claudius* (AMUGS, 9), Berlin, 1986, p. 219, note 165.

Monete scoperte a Lucus Feroniae

Fiorenzo CATALLI*

Nel 1952, nei mesi di aprile e maggio, in territorio di Capena (Roma), nella località detta Scorano, sono stati eseguiti alcuni scavi che hanno permesso la localizzazione certa del sito di *Lucus Feroniae*¹

Il nome della antica divinità italica, *Feronia*, fu letto in diverse iscrizioni, o frammenti di iscrizioni, di età arcaica, scoperte negli stessi scavi, che si sono rivelate essere dediche alla divinità.

Inoltre una favissa del santuario, reso celebre da Livio, ha restituito molti materiali tra cui un notevole numero di oggetti votivi rappresentanti diverse parti del corpo umano (teste, occhi, mani e piedi in terracotta) oppure statuette di animali.

Sono state ancora scoperte una quarantina di piccole basi di pietra che in origine dovevano sostenere alcune statuette in bronzo ma asportate già in antico.

Gli scavi, dopo questo inizio assai promettente, sono stati proseguiti, inizialmente con scadenza annuale, e hanno interessato la totalità della piazza del Foro e dei suoi monumenti.

Il Foro è limitato, sul lato occidentale, da un portico con taberne mentre sul lato settentrionale è presente un alto podio che contiene l'*aerarium* (il tesoro della colonia) e nella parte superiore un edificio rettangolare, forse una basilica. Un altro basamento unito al podio e munito di un rivestimento marmoreo è certamente l'altare per il culto municipale di *Feronia*. Il basamento, infatti, è accostato ai lati da due basi entrambi con dedica alla divinità che viene nominata *Salus* e *Frugifera*.

Il vero altare del santuario si trova nella zona sacra sita sul lato orientale del Foro. Un alto muro in opera reticolata ha la duplice funzione di muro di sostegno dell'acquedotto locale, Aqua Augusta, e di muro del témenos del santuario.

Oltre l'altare, il santuario doveva disporre di un bosco sacro (*lucus*) e di un tempio.

Di quest'ultimo, forse di tipo italico, sono stati scoperti solamente alcuni muri di fondazione e pochi pezzi della facciata, il tutto riferibile alla fine del II secolo a.C.

L'altare è, secondo il parere di alcuni studiosi, il grande basamento a pianta quadrangolare costruito a blocchi di tufo che è ancora oggi visibile di fronte al portico d'ingresso all'area sacra sulla piazza del Foro.

* Roma.

¹ Degli scavi eseguiti a Lucus Feroniae dal 1952 in poi esistono alcune sintesi: G. AMBROSETTI e M. TORELLI, in *EAA*, s. v., IV e nel supplemento; A.M. SGUBINI-MORETTI, in *RE*, IV, 1975, p. 1966 ss. s.v.; EAD., *Colonia Iulia Felix Lucus Feroniae: un problema aperto ancora*, in *L'agricoltura romana. Atti del I Convegno (Tolfa 10-11 novembre 1979)*, Roma, s.d., p. 35-49; M. TORELLI, *Etruria*, Bari, 1980, p. 30-39 con la bibliografia precedente.

La grandissima parte delle monete sono ancora inedite. Le sole monete rinvenute negli scavi del 1960-1961 dall'area sacra sono tuttora in corso di studio da parte di P. PETRILLO SERAFIN che ha curato la pubblicazione di alcuni pezzi in *Tevere antica via per il Mediterraneo*, Roma, 1986, p. 195. Primi rapporti generali sul rinvenimento di monete dagli scavi a cura di R. BARTOCCINI, *Soprintendenza alle antichità di Roma II*, in *AIIN*, 2, 1955, p. 185-187; a cura di M. MORETTI, *Soprintendenza alle antichità dell'Etruria meridionale*, in *AIIN*, 7-8, 1960-1961, p. 326-327; a cura di A.M. MORETTI, *Soprintendenza alle antichità dell'Etruria meridionale*, in *AIIN*, 16-17, 1969-1970, p. 299-308.

Per le monete rinvenute durante lo scavo della Villa dei Volusii Saturnini vedi M. MORETTI -A.M. SGUBINI-MORETTI, *La Villa dei Volusii a Lucus Feroniae*, Roma, 1979, p. 46-51.

Per le monete rinvenute durante gli scavi della fattoria in contrada Baciletti e per l'altra villa rustica vedi i contributi di chi scrive rispettivamente in *Tevere, un'antica via per il Mediterraneo*, *op. cit.*, p. 200-201 e *Misurare la terra: centuriazione e coloni nel mondo romano*, in *Città, agricoltura, commercio: materiali da Roma e dal suburbio*, Modena, 1985, p. 59-60.

Gli scavi condotti, sia in questa area sacra sia nel resto della città, hanno permesso il recupero di alcune migliaia di monete e diversi centinaia di pezzi di *aes rude*.

Nonostante il fatto che la maggior parte delle monete manchino di una precisa catalogazione e pubblicazione, sulla base di quanto edito e dei dati che sono riportati sui diari di scavo, è possibile tentare una prima valutazione.

Gli scavi, come già ricordato, hanno interessato soprattutto gli edifici pubblici e privati sulla piazza del Foro e i livelli di occupazione dell'età imperiale fin dalla creazione della colonia in età augustea (o cesariana?): Colonia Iulia Felix Lucoferonensium.

La stessa pavimentazione del Foro è databile all'età augustea ed è stata realizzata a spese del duoviro A. Octavius, come è ricordato in una iscrizione trovata nel Foro.

La maggior parte delle monete scoperte nei livelli al di sopra della pavimentazione augustea sono databili ai secoli I e II d.C., in pieno accordo con quanto si conosce della storia della colonia. Infatti almeno durante il I secolo d.C. la colonia dovette godere di un momento di grande prosperità per effetto del patronato dei Volusii Saturnini e tale prosperità fu evidente anche nel corso del II secolo d.C. Al contrario le monete databili ai secoli III e IV d.C. sono in numero decisamente minore. È già stato supposto che la città abbia subito un considerevole declino iniziato nel III secolo e culminato nel secolo successivo in relazione agli avvenimenti militari legati alla battaglia ai *Saxa Rubra*. Alcune sepolture di età cristiana scoperte negli immediati dintorni della città hanno riutilizzato elementi marmorei prelevati da monumenti della colonia che doveva quindi essere già in abbandono. Un dato estremamente interessante è quello che proviene dalle campagne di scavo degli anni 1960-1961, anni in cui lo sforzo degli scavatori si concentrò nell'area sacra. Già nel 1952 a seguito di un intervento di urgenza proprio in questa area per la presenza di escavazioni clandestine oltre al recupero di un gran numero di materiali di una fossa votiva di cui si è detto sopra, si rinvennero 24 monete tra cui: una oncia fusa (*RRC*, 14/6); 6 bronzi romano-campani (*RRC* 16/1a, 17/1a, 26/3); 8 tra once e semonce della serie prorata di riduzione semilibrale e post-semilibrale (*RRC*, 38/6-7, 41/10-11); un sesterzio anonimo (*RRC* 44/7); 3 nominali diversi della serie prorata di riduzione sestantaria (*RRC* 56/2-5-8); 2 bronzi coi soliti tipi neapolitani (cfr *SNG ANS* 465) e 3 bronzi illeggibili.

I materiali rinvenuti negli anni 1960-1961 sono decisamente più cospicui. Ad un primo conteggio risultano: 108 pezzi di *aes rude* per un totale di diversi chilogrammi di metallo, 3 pezzi di *aes signatum*, 10 monete fuse di serie romana, oltre novanta bronzi di serie romano-campane, circa 80 bronzi di serie urbana prorata, almeno 55 bronzi di zecche campane (soprattutto Neapolis, Teanum, Suessa) e qualche altro pezzo di zecca punica e siceliota. Ancora nelle campagne di scavo 1970-1971 che hanno interessato i livelli al di sotto della pavimentazione augustea della piazza del Foro, sono state scoperte alcune strutture murarie databili nel corso del III secolo a.C. Tra le monete recuperate in questa occasione, pochissime quelle di età imperiale, assai probabilmente infiltrazione dai livelli superiori, ancora abbondanti le serie romano-campane (oltre 70 pezzi), quella urbana prorata (oltre 70 pezzi), oltre a monete fuse, pezzi di *aes rude* e *aes signatum* e della zecca di Neapolis (almeno 25 bronzi). Gli edifici cui si riferiscono le strutture murarie rinvenute sono evidentemente da collegare al momento di piena attività del santuario repubblicano.

Nel 1975 lo scavo è proseguito nella zona del santuario allo scopo di indagare l'area che aveva restituito l'abbondante materiale della stipe votiva. Notevole l'interesse per i materiali acquisiti. Assieme ai soliti ex voto di terracotta (teste, statuine, parti anatomiche umane, statuine di animali) si sono rinvenute centinaia di monete fra le quali sono in abbondanza i bronzi delle serie romano-campane, delle serie urbane della prora di riduzione e vari nominali di città magno greche. Il tutto nella stessa composizione in percentuale che nei precedenti analoghi ritrovamenti.

Secondo alcuni studiosi tutti questi oggetti e tutte queste monete trovate sparse nella zona sacra sia sulla superficie che nelle fenditure della roccia potrebbero rappresentare i resti del ben noto saccheggio subito dal santuario ad opera di Annibale, nel 211 a.C., e

ricordato da Livio (XXXVI, 2, 8). Soprattutto il rapporto con Annibale è senza dubbio il dato più interessante se posto in relazione con la presenza di diverse monete, tra quelle rinvenute nell'area sacra, appartenenti alle serie più antiche della zecca romana, serie la cui definizione cronologica attende ancora una precisa risposta.

Ma è evidente che non esiste ancora la prova archeologica che colleghi questi materiali con quell'avvenimento della seconda guerra punica. Una auspicabile ricerca futura potrebbe offrirci la risposta che cerchiamo.

Un altro discreto nucleo di monete è stato poi recuperato dagli scavi della villa extraurbana appartenuta all'importante famiglia senatoria dei Volusii Saturnini.

Rinvenuta in occasione dello sbancamento dell'Autostrada del Sole, la villa è finora l'unico esempio di grande praedium senatorio quasi integralmente scavato. Questi scavi hanno restituito 40 monete quasi esclusivamente relative all'epoca imperiale. Un solo quinario del I sec. a.C. può essere riagganciato alla fase tardo repubblicana della villa mentre un asse della serie della prora, un bronzo romano-campano e un bronzo coi tipi neapolitani (Apollo/Toro androprosopo) appartengono alla frequentazione dell'area nel III secolo a.C.

Altri nuclei di monete sono stati recuperati dall'esplorazione di aree limitrofe alla colonia ma territorialmente facente parte di essa.

Resti di una fattoria in contrada Baciletti, esplorata nel 1984-1985, edificata per la prima volta all'inizio del I secolo d.C. fu abitata, con diversa intensità sino alla fine del V secolo, un lungo periodo di cui sono fedele testimonianza le 79 monete rinvenute. Tra queste solo due, infatti, una semuncia della serie della prora di riduzione semilibrale e un bronzo della zecca siceliota di Tyndaris, sono riferite al III secolo a.C.

Poco più a nord dell'abitato, infine, è stata esplorata una villa rustica che ha presentato fasi diverse costruttive testimoniate bene dal sovrapporsi delle murature, dal cambiamento di destinazione d'uso degli ambienti e dai materiali.

Tra questi ovviamente le monete, per un totale di 39 pezzi distribuite tra la metà del III secolo a.C. (serie prorata e serie romano-campane) e il V secolo d.C.

Studies in Computer Applications

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Each of the following three studies exemplifies a particular application of computerisation to numismatics. They draw, however, on common experience. All in varying measure make use of NUMiSmatica, a database structure which in turn owes much to the series of international meetings and workshops which have taken place since the 1° Incontro Internazionale *La numismatica e il computer* was held in Milan in 1984¹. A brief description of NUMiSmatica, rehearsing features shared by the single projects, precedes the studies proper.

The immediate point of departure was the invitation extended to one of the writers (T. Volk) by the II Università degli Studi di Roma (Tor Vergata) to lecture in the Dipartimento di Storia during the second semester of the academic year 1990/91 on new methods in the cataloguing of numismatic material. The practical part of the course focussed on preparing computerised records for a mass of numismatic material dredged from the river Tiber in 1988 and subsequently entrusted to the Cattedra di Numismatica (P. Serafin) for study and publication. The development and testing of a database program to handle these finds was the topic of a research seminar conducted by P. Serafin and T. Volk during the summer of 1991. The background to the «Tevere project» and an account of the working model chosen for its elaboration is the subject of the first study by P. Serafin, M. Marconi, and M. Tonsini.

Coincidentally with the research seminar, T. Volk was able to work on the computerisation of the collections of the Civica Raccolta Livornese di Monete e Medaglie. A small hoard of Roman republican coins (from Campiglia Marittima) provided him with an opportunity to illustrate the advantages of using so-called «master-records», one of the features of NUMiSmatica incorporated in the Tevere database and the subject of the second study which for reasons of space is published here in summary form only. The same collection is a point of reference for the third study («The curator strikes back; or computerisation in practice»), a synthesis of remarks made by T. Volk in summarising the Congrès panel-discussion of that title chaired by Dr. M.L. Bates, the out-going Chair of the Sub-committee for the Computerisation of Numismatic Data.

- A. *A brief introduction to NUMiSmatica, a design for a relational database for numismatics* (T. R. Volk);
- I. *The computer in university teaching : cataloguing the coins from the river Tiber* (P. Serafin Petrillo, M. Marconi and M. Tonsini);
- II. *Master-records : a contribution to computer cataloguing (Summary)* (T. R. Volk);
- III. *The curator strikes back; or computerisation in practice* (T. R. Volk).

A. *A brief introduction to NUMiSmatica, a design for a relational database for numismatics*² (T.R. VOLK)

1. Introduction

1. 1. NUMiSmatica is a design for a relational database for numismatics based on a main-frame program devised in collaboration with the Ministerio de Cultura (Madrid) as one of a number of

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¹ *La Numismatica e il Computer. Atti del 1° Incontro Internazionale organizzato dal Comune di Milano, Milano 21-22 maggio 1984*, ed. by S. BALBI DE CARO (Suppl. al BollNum. 1), Rome, 1984.

² For a fuller (though dated) account, see T. R. VOLK et al., *Towards a Numismatic Database : the Spanish Experience*, in *La Numismatica e il Computer* (n. 1, above), p. 47-61.

databases intended to support the Puntos de Información Culturales (PIC) service, a public access network covering a range of cultural and related activities.

1. 2. Although developed in Spain, the original version of NUMiSmatica drew on the experience of scholars from many countries. Its PC form continues to reflect their ideas and criticisms. In particular, it incorporates in the so-called «core-file» or «scheda-nucleo» the twelve concepts recommended by the informal working party (later subsumed in the Sub-committee for the Computerisation of Numismatic Data) as elements essential for future exchanges of data (see § 5.).

2. Scope

2. 0. In its main-frame format NUMiSmatica was designed as an all-purpose system able to handle the full range of numismatic materials and to do so in a variety of contexts: collections-management, archaeological association, and numismatic research.

3. Features

3. 0. Four features of the structure of NUMiSmatica call for particular comment.
3. 1. Recognising the multiple nature of most numismatic objects, NUMiSmatica employs the idea of a «master-record» to describe features common to each member of a given series or set, reserving individual object-records for such variables as weight, die-axis, etc., and (where appropriate) a transcription of the «real» state of an incomplete or otherwise irregular or defective legend (see, in general *Study II*, below).
3. 2. It offers, too, a «version» facility (for the PC this is referred to as a «shadow-file») for alternative statements relating to the same object or group of objects³. So, for example, in conjunction with the so-called «reliability» code (see § 3. 4.), this facility offers a means of entering the details of the undertype of an overstruck coin, without at the same time creating a second object-record. (Where the alternative expression is a matter of terminology rather than of substance, the simpler solution of entering both the «preferred» term and the alternative term or terms on the same record, but showing the latter in parenthesis (here in the form "< >") is generally employed).
3. 3. A feature of the design of individual NUMiSmatica entry screens is a limited number of multi-purpose fields. These are intended to provide for the entry of similar types of data, their designation varying according to the class of object to be catalogued. This is to avoid the creation of too many dedicated fields without at the same time compromising the universality of the database's application. The precise scope of such multiple fields can be indicated in an associated «category» sub-field. Thus, the concept of «issue» [EMISSIONE] might on different occasions comprehend the name or names of a monetary «magistrate» or «magistrates» (flagged by the expression «MAGR» in the preceding category sub-field), a symbol («SIMB»), a control-mark («CTRL»), etc., to a total of five such entries in any one record (but see also *Study I*, below, at § 3. 2.).
3. 4. NUMiSmatica also recognises that uncertainty attaches to many statements in numismatics, whether arising from the current state of scholarship or the result of a particular specimen's poor condition. Each substantive field is therefore provided with a sub-field in which the reliability of the data might (at the compiler's choice) be evaluated. This expression of «reliability» has two aspects: the «quality» of the statement (for example «probable»/ «possible»/ «doubtful»/ «traditional», etc., whether in respect of the particular specimen or in regard to that class of object as a whole); and the form or status of the statement (for example «equivalent», i.e. another way of saying the same thing; «alternative», i.e. one of two or more possible options; «approximate», etc.) (see also *Study I*, below, at § 2.6.).

³ This facility offers a solution to much of the difficulty identified by Br. HELLY, *Méthodes de laboratoire, statistique et informatique en numismatique*, in *A Survey of Numismatic Research 1985-1990*, ed. by T. HACKENS et al. (International Association of Professional Numismatists Special Publication, 12), Brussels, 1991, II, p. 847-856 at p. 853.

4. PC version

4. 0. The PC version of NUMiSmatica seeks to apply the experience gained from the development of the main-frame program to the design of a system or structure capable of running on commercially available database packages prepared for IBMTM compatible personal computers. Its format is relational in both horizontal and vertical senses.
4. 1. The horizontal aspect of the database's structure derives from the creation of separate files for each main category of the data which together constitute the object's documentation (the «document»). At the centre of the system is a core-file [scheda-nucleo] containing a summary description of the object or group of objects to be catalogued. This core-file is supported, according to cataloguing needs, by a series of extension or sub-files (flagged by the appropriate entry or entries in the Extension [AMPLIFICAZIONE] field): a file for administrative data (collection-management), a provenance or archaeological file (for «found» pieces), a conservation/ analysis file, and a bibliographical file. The separation of these various classes of data (and any others which the user may find useful) not only makes for more manageable file-compilation, but affords a considerable saving of computer-memory. Instead of reserving space in each document for all of these eventualities (as many database packages would require, when the complete documentation of a given specimen is entered on a single file), the individual sub-record is created if and when the need arises. Only then is the memory required to store that part of the document actually consumed.
4. 2. A vertical relationship exists between the core-file's so-called «master-records» and the individual object-records which they govern (see *Study II*, below).
4. 3. The relationship between the various records which constitute the object-document is normally established by means of one or more of the elements included in the object-reference or «Reference» code (see § 6.).

5. Basic concepts

5. 0. Central to the core-file are the twelve basic concepts derived from the Milan colloquium and from later discussions of the informal working-party which preceded the Sub-committee for the Computerisation of Numismatic Data⁴. Here, they are presented in the order and in the elaborated form in which they have been incorporated in the design of a typical NUMiSmatica PC file (see also Fig. 1, 2).
5. 1. *Identification* [IDENTIFICAZIONE]: a summary identification of the object in the form of a hierarchical string encompassing such elements as «issuing-authority», «mint», «issue», etc.; the purpose of this field is to answer straight-forward questions along the lines of «Do you have coins of Vespasian?» and for this reason it is normally completed using conventional or traditional terminology. In the sample configuration illustrated in Fig. 2 the principal string is complemented by separate fields for Series (for example «HELL» = «Hellenistic», «ROMN» = «Roman», etc.) and Sub-series (for example «republic», «empire», etc.). This is to facilitate indexing; the same information can also be entered as part of the string (see also «Reference-key» at § 6. 2. and § 3. for a working, broad-brush classification).
5. 2. *Status* [STATUS]: a statement of whether the object is a «regular» issue («RG»), an «imitation» («IM»), a «counterfeit» («CF»), etc.
5. 3. *Total* [TOTALE]: the number of objects to which a record refers; in the case of an individual record, where the field Sub-total [Subtotale] is used, this is normally «1»⁵.
5. 4. *Dating* [CRONOLOGIA]: the date of manufacture (or period of issue⁶) expressed in years of the common era («0» = B.C.; «1» = A.D.) in the form «from year» x «to year» y; this may be a

⁴ Previously outlined in T. R. VOLK, *The Application of Computers, in A Survey of Numismatic Research 1978-1984*, ed. by M.J. PRICE *et al.* (International Association of Professional Numismatists Special Publication, 9), London, 1986, II, p. 1041-1076 at p. 1048-1049.

⁵ Where the system of «master-records» is employed, the figure entered under Total should equal the sum of the figures entered in the individual records under Sub-total; this by itself offers a simple control procedure.

⁶ The distinction between «date of manufacture» and «period of issue» is contained in the second part of the Accuracy field: «0» = «within the period indicated»; «2» = «through the period indicated» (see *Study I*, below, at § 2. 6.). In the case of early modern or contemporary issues on which a

«conventional» period (for example the span of a reign) or the «precise» dating of the issue, or both may be used.

5. 5. *Summary description* [DESCRIZIONE] : the legend and type of obverse and reverse sides, and (in the case of early modern and contemporary issues) any edge inscription or decoration, in sufficient detail to make the piece recognisable to a scholar or to allow an accurate identification of a piece the condition of which is too poor to permit of a precise bibliographical citation (More complex descriptions, incorporating either detailed treatment of particular features or elements of type-classification, may be given in collective records held in the «shadow-file» described in *Study II*, below, at § 4.).
5. 6. *Standard literature* [BIBLIOGRAFIA] : a reference to a standard reference work (for example *RIC*, *CNI*, etc., but not usually the citation of comparanda. In a typical NUMiSmatica database, the reference number may refer to a text-entry («pg») or to a plate («tv»), as appropriate.
5. 7. *Material* [MATERIA] : the material (metal) of which the object is made, expressed either in the form of a conventional abbreviation (for example «AE», «AR», «AV», etc.) or in free-text.
5. 8. *Name/denomination* [NOMINALE] : the denominational name (in the case of coins) or full name (in the case of other classes of numismatic object) (see also «Reference-key» at § 6. 2. and § 6. 3.).
5. 9. *Weight* [peso] : the present weight of the specimen in grammes; in the case of an object that has been cleaned, the earlier weight may be recorded in the second «weight» field.
5. 10. *Remarks* [Osservazioni] : any observations of a technical character, including data relevant to evaluating the object's weight (for example degree of wear, completeness, etc.). NUMiSmatica offers the option of up to three coded replies or a free-text entry, or a combination of the two (see also *Study I*, below, at § 3. 2.).
5. 11. *Diameter* [Diametro] : the diameter of the flan in millimetres; in the case of non-circular pieces, a second value may also be entered (note that this concept and the following are optional, their use depending on the class of material to be catalogued).
5. 12. *Die-axis* [Posizione dei coni] : in NUMiSmatica-based files the preferred value is one expressed in degrees of a circle in minimum steps of 5° (optional, as § 5. 11.).
5. 13. In addition, there is a field for additional *Notes* [NOTE]. This is intended only for data that do not properly fit one of the dedicated fields. Its use as a sink for «lazy» information is discouraged. Note, too, that its application may be limited by operational restrictions : under the *dBASE III PLUS^M* applications package, for example, fields of more than a hundred characters (as a typical field for Notes) can be searched, but not indexed⁷.

6. Reference-key

6. 0. Following the usage of the main-frame version of NUMiSmatica, the first paragraph in the file (Reference [RIFERIMENTO]) comprises a reference common to all the file types employed in the database. This is an alpha-numeric code (supported elsewhere in the «document» by an identification in natural language) which provides every object entered on the database with a unique number. The key is articulated, so that the various elements of which it is composed (for example class of object, culture, country of current location or finding, etc.) can also be used to index the database into easily searchable units. It provides, too, a means of linking the numismatic material with such complementary elements as associated finds from the same archaeological context, hoard-container, etc.
6. 1. *File-type* [File-tipo] : the type or class of file to which the object belongs is indicated by a numerical code (for example «1» = «hoard», «2» = «site-find», «4» = «permanent collection», «5» = «commercial stock/auction catalogue», etc.); the structure or configuration of object-records is common for each file-type, but their separation enables the investigator to avoid double-counting. So, for example, in the case of a hoard-specimen which later enters a museum collection, the association with the find which would enable it to be included in the hoard-file may have been lost long since and the coin accordingly registered with other non-provenanced material (for recognised cross-references see § 8. 3., below).

«date» appears as part of the legend or type, «period of issue» may represent a more useful application of the Dating paragraph.

⁷ The alternative of a «Memo» field offers greater capacity (up to 5000 characters under *dBASE III PLUS*), but such fields can be neither sorted nor indexed.

6. 2. *Class of object* [classe oggetto] : a broad-brush classification of the material which is intended to enable a large data-bank to be searched efficiently by using an index-facility to focus on the records immediately relevant to a particular enquiry (for example «A» = «coin», «M» = «medal», «O» = «decoration», «P» = «paper-money», etc.); a closer definition of the class of object can be offered in the Name field (see § 5. 8.) or in a varied application of the Culture sub-field of the Reference code (see § 6. 3.).
6. 3. *Culture* [civiltà] : a similarly broad-brush definition of the period or culture to which the object belongs (for example «1» = «ancient», «3» = «medieval European», «7» = «Islamic», etc.), with closer identification being offered by the Identification field (see § 5. 1.) and Dating field (see § 5. 4.); as a variation, this field may be used to qualify the object-class indicated in the preceding sub-field, for example class of object «D» («token») may be qualified in this sub-field by «A» («privately issued money-token», «B» («vending machine token»), etc.
6. 4. *Country* [Paese] : the International Standards Organisation's three-letter code for the country in which the museum is located or in which the find was made (for example «ITA» = «Italy»).
6. 5. *Entity* [Entità] : a national territorial code which can be applied to both museum collections and find locations; in the case of Italy, the suggested code comprises the ICCD code for the region (for example «12» = «Lazio»), the existing provincial codes (for example «RM» = «Roma»), and the base postal codes for individual comuni (for example «100» = «Roma»), followed by an internal code for the particular collection or find (note that the short-name for either museum or find is given in free text at Name of entity [Nome entità]; an extension sub-file provides fields for the close identification of localities under both their present and their past names)⁸.
6. 6. *Object* [Oggetto] : the object code before the decimal point identifies the group or «ideal» type (corresponding to the «master-record») to which the object belongs and the part after the point the single specimen within that group (note that object codes beginning «9» are reserved for complementary material, for example «91101» - «96999» are the keys to various classes of bibliography).
6. 7. *Version* [versione] : where it is appropriate to enter alternative or supplementary data in any of the fields comprising the descriptive element of an object's core-file (see § 3. 1.), the main record is completed as «1» and the corresponding records in the shadow-file as «2», «3», etc.; this enables data relating to the same version of a record to be held together (for example in the case of a choice of two possible mint-attributions, the alternatives can be individually associated with the appropriate bibliographical references).

7. Usefulness

7. 0. The concept of «usefulness» [UTILITÀ] complements NUMiSmatica's «reliability» and «accuracy» fields/sub-fields. Unlike the other two, it treats of the record as a whole. One of its purposes is to enable the investigator to eliminate from his or her search the mass of defective or incomplete records which may eventually accumulate within a large data-bank.
7. 1. *Status* [Status] : the distinction is made between «draft» and «edited» entries.
7. 2. *Grade* [Grado] : the quality of «edited» records may be graded from «1» («complete») through «6» («of documentary value only»).

8. Figures

8. 0. The following figures distinguish the various elements from which a typical NUMiSmatica «core-file» or «scheda-nucleo» installed on Ashton-Tate/ Borland's dBASE database package is constructed. To facilitate comparison with the completed examples presented in the accompanying studies, the Italian-language version of the mask is shown.
8. 1. *Figure 1* illustrates the twelve basic concepts [voci essenziali] which emerged from the Milan (1984) and Madrid (1985) meetings, here stripped of the individual fields designed for their elaboration.
8. 2. *Figure 2* illustrates a possible configuration for the implementation of the twelve basic concepts.

⁸ See, for example, the sub-divisions of «Toponimia actual» and «Toponimia antigua» in T. R. VOLK *et al.*, *Tesoros monetarios de Hispania antigua : proyecto para un banco de datos e inventario*, in *V Congreso Nacional de Numismática*, Sevilla, 1982. *Comunicaciones* (= *Numisma*, 180-185, 1983), p. 9-41 at p. 26.

| | | | |
|---|----------------------|--|----------|
| <div style="display: flex; justify-content: space-between; align-items: center; padding: 5px;"> <div style="width: 60%;">NUMismatic : voci essenziali</div> <div style="width: 35%; border: 1px solid black; height: 30px;"></div> </div> | | | |
| <div style="border: 1px solid black; padding: 5px;">IDENTIFICAZIONE</div> | | | |
| <div style="border: 1px solid black; padding: 5px;">STATUS</div> | | <div style="border: 1px solid black; padding: 5px;">TOTALE</div> | |
| <div style="border: 1px solid black; padding: 5px;">CRONOLOGIA</div> | | | |
| <div style="border: 1px solid black; padding: 5px;">DESCRIZIONE (Sommano)</div> | | | |
| <div style="border: 1px solid black; padding: 5px;">BIBLIOGRAFIA STANDARD</div> | | | |
| <div style="border: 1px solid black; padding: 5px;">MATERIA</div> | | <div style="border: 1px solid black; padding: 5px;">NOMINALE</div> | |
| TECNICA | Peso Osservazioni | g | |
| | Diametro | mm (mm) | Pos. con |

Fig. 1. Twelve basic concepts.

| | | | | | | | | | |
|---------------------------------------|--|--|-----------|--|---------|--|-----------|--|--|
| NUM5matrica - voci essenziali (elab.) | | | | | | | | | |
| | | | | | | | | | |
| IDENTIFICAZIONE | | | | | | | | | |
| Conven.le | | | | | | | | | |
| Sene | | | | | Subsene | | | | |
| | | | | | | | | | |
| STATUS | | | Stat1 | | Stat2 | | TOTALE | | |
| | | | | | | | Totale | | |
| | | | | | | | Subtotale | | |
| CRONOLOGIA | | | Da | | Fino | | | | |
| | | | Conven.le | | era | | anno | | |
| Precisa | | | era | | anno | | era anno | | |
| | | | | | | | | | |
| DESCRIZIONE (Sommano) | | | | | | | | | |
| Diritto | | | | | | | | | |
| Leggenda | | | | | | | | | |
| Tipo | | | | | | | | | |
| ROVESCIO | | | | | | | | | |
| Leggenda | | | | | | | | | |
| Tipo | | | | | | | | | |
| TAGLIO | | | | | | | | | |
| | | | | | | | | | |
| BIBLIOGRAFIA STANDARD | | | | | | | | | |
| Testo | | | | | | | | | |
| pg | | | | | | | | | |
| lv | | | | | | | | | |
| a | | | | | | | | | |
| | | | | | | | | | |
| MATERIA | | | | | | | | | |
| Abbr | | | | | | | | | |
| Testo | | | | | | | | | |
| NOMINALE | | | | | | | | | |
| | | | | | | | | | |
| TECNICA | | | | | | | | | |
| Peso attuale | | | | | | | | | |
| Osservazioni | | | | | | | | | |
| g | | | | | | | | | |
| prima di pulitura | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| g | | | | | | | | | |
| Diametro | | | | | | | | | |
| .mm (x .mm) | | | | | | | | | |
| Pos. conii | | | | | | | | | |
| | | | | | | | | | |
| NOTE | | | | | | | | | |

Fig. 2. Elaboration of basic concepts.

[illegible]

Fig. 3. Organisational fields.

| | | | |
|---|-----|-------------------------|---------------------------|
| NUMiSmatica : attendibilità / accuratezza | | UTILITA Status Grado | |
| <div> <div>[]</div> <div>[]</div> </div> | | | |
| [] | [] | [] | Accuratezza [] [] |
| <div> <div>[]</div> <div>[]</div> <div>[]</div> <div>[]</div> <div>[]</div> </div> | | | |
| <div> <div> <div> <div>[]</div> <div>[]</div> </div> <div> <div>[]</div> <div>[]</div> </div> </div> <div> <div>[]</div> <div>[]</div> </div> </div> | | | |
| <div> <div> <div> <div> <div>[]</div> <div>[]</div> </div> <div> <div>[]</div> <div>[]</div> </div> </div> <div> <div>[]</div> <div>[]</div> </div> </div> </div> | | | |
| <div> <div> <div> <div> <div>[]</div> <div>[]</div> </div> <div> <div>[]</div> <div>[]</div> </div> </div> <div> <div>[]</div> <div>[]</div> </div> </div> </div> | | | |

Fig. 4. Reliability and accuracy sub-fields.

8. 3. Figure 3 illustrates various classes of organisational data. In addition to the Reference code (see § 6.), they comprise the keys which link the record with data held elsewhere (viz. cross-reference to any record in another database file in which the object is described [RIFERIMENTO

CROCIATO]⁹); the object's existing accession/find number, etc. [FONTE]; and the corresponding frame number in any digitised image-store [MEMORIZZAZIONE IMAGE]. A tail paragraph gives the names of the compiler and the editor (both with dates).

8. 4. Figure 4 illustrates the various fields and sub-fields available to the compiler to comment on the reliability of his or her data. In addition to Usefulness [UTILITÀ] (see § 7.), there are dedicated fields to provide for the compiler's or the editor's comments on the accuracy of the dating proposed for the object and on the accuracy of the citation to the standard-work employed as an external reference to the material (see also *Study I*, below, at § 2. 6.). The «reliability» sub-fields for each substantive data-field are indicated by «[]».

*I. The computer in university teaching : cataloguing the coins from the river Tiber*¹⁰

I. Introduction (P. SERAFIN PETRILLO)

The vast quantity of archaeological material which the river Tiber has given up over the years constitutes one of the most valuable sources for the history of the city of Rome. These finds have been occasioned by various types of operation¹¹. At a time when the river was still in general use as a commercial waterway, they were the product of workings connected with the construction or extension of port facilities and of operations undertaken for their maintenance. A later occasion was the organisation of river defences and the construction of the modern stone embankments which are their principal feature. Finally, the recovery of much material is owed to the dredging operations which for a variety of reasons are carried out from time to time.

The finds from the Tiber comprise various classes of artefacts, including a remarkable number of coins and other numismatic objects. Overall responsibility for this material lies with a special section of the Italian Ministero per i Beni Culturali e Ambientali, the appropriately named «Ufficio Tevere», under the direction of Claudio Mocchegiani Carpano. By agreement with Dr. Mocchegiani Carpano, the study of the numismatic finds recovered during recent work on the bed of the Tiber has been entrusted to the Cattedra di Numismatica in the second university of Roma at Tor Vergata¹².

The Tor Vergata research project has two principal aims. The narrow (medium-term) intention is the publication of a full listing of the new material. But the broader purpose is to relate this material to what is already known about currency from the city of Rome, and in particular to the corpus of *aes* coinage, and to the rôle of the Rome mint evidenced by two groups of finds deposited in the *medagliere* at the Museo Nazionale Romano. These are the collections of «monete dal Tevere» and «monete dal sottosuolo urbano» (the latter also in large part composed of material taken from the Tiber), themselves either published¹³ or in course of publication¹⁴. In fulfilling both aims the project seeks to record data in a form compatible with the structure of the computerised

⁹ This may be the Reference code of a record entered on a NUMiSmatica file of different type (e.g. in the case of a coin from the Mongó hoard, Spain, acquired by the British Museum, the hoard file «1 A1 ESP 130306300001» contains a cross-reference to the museum file «4 A1 GBR WC1B3DG00001») or the Document Number of an independent database.

¹⁰ A full discussion of the Tiber Project and of the Tevere Database will appear in the *BollNum*.

¹¹ For a full account of the Tiber finds (with earlier bibliography), see the recent survey by C. MOCCHEGIANI CARPANO, *Il Tevere : archeologia e commercio*, in *BollNum*, 2-3, 1984, p. 21-81.

¹² The material was the subject of a research seminar during the academic year 1989/90, for which draft catalogue entries were prepared by Tiziana Cassandro, Beatrice Fortini, Alessandra Serra, Giulia Rocco and M. Desia Piervenanzi.

¹³ H.-M. VON KAENEL, *Roma - Monete dal Tevere - L'imperatore Claudio I*, in *BollNum*, 2-3, 1984, p. 85-325; F.E. KOENIG, *Roma - Monete dal Tevere - L'imperatore Gaio (Caligola)*, in *BollNum*, 10, 1988, p. 21-186.

¹⁴ M. R.-ALFÖLDI et al., *Geld aus dem antiken Rom*, Frankfurt-am-Main, 1991.

data-bank created by the Istituto Poligrafico e Zecca dello Stato (IPZS) as a centralised reference-store of numismatic data from Italian sources¹⁵.

The numismatic material from the 1988 dredging operations totals some 6,000 items¹⁶. Although this number is not especially large, it represents a group too numerous to be easily organised by means of traditional paper or card catalogue sheets. Moreover, the material is relatively heterogeneous, comprising issues from Hellenistic through contemporary times, although the greater part are issues of the Roman Empire. But what is particularly relevant to the choice of documentation system is the poor condition of most of the finds, the result of their river-bed context¹⁷. The principal problem was, therefore, to arrive at a form of record which took account of each of these elements: number, diversity, and preservation. In particular, our need was to create summary records which were capable of easy revision and which would allow the data they contained to be manipulated readily and with precision. The kind of question that was envisaged was a quick sort of the material by period of issue and by find-group, in order that each class of object could be treated appropriately.

Within our overall objective of creating a flexible program-structure which allowed a large number of individual data to be handled rapidly, had powerful indexing facilities, and would permit data to be easily retrieved and compared, it was essential that the result should be compatible with the system being developed by the Centro Elaborazione Dati at the IPZS. This is a collaborative venture with which the Cattedra di Numismatica has been closely associated. Its scope is more ambitious than the immediate requirements of the Tor Vergata project. In addition to providing for full object-descriptions, it seeks to handle various classes of administrative data and such conservation data as cleaning and restoration and the results of composition-analyses. In its present form, however, the IPZS's system is available only as a program for data-capture formulated primarily for museums which do not necessarily have the services of a full-time numismatist.

A further important consideration was that students attending courses organised by the Cattedra di Numismatica should learn how databases are constructed. The immediate reason for this was that these same students were to be responsible for processing the Tiber material. It was, however, also our hope that first-hand experience would enable students to identify possible applications of the computer for other types of study or research. The university already offers students in the humanities a general course in information technology¹⁸. Rather than to have numismatic applications taught by a specialist in computer science, it was therefore thought that it might be more fruitful to ask a numismatist with experience of computers to give the course. In this way teaching would focus on a specific set of problems immediately relevant to the task in hand. Accordingly, an application was made under the provisions in current state legislation on universities for the appointment of visiting lecturers to invite T. R. Volk to teach

15 S. BALBI DE CARO, R.M. NICOLAI, E. STAUNUOVO POLACCO, *Le monete dal Tevere: dalla banca dati ai caratteri a stampa*, in *Archeologia e Informatica* (= *Quaderni dei Dialoghi di Archeologia*, 4, 1988), p. 74-76.

16 The operation to recover the material from the river-bed was undertaken by Tiziana CASSANDRO, who was also responsible for preparing the group for study and for the publication of a preliminary note, *Rinvenimento di materiali: il dragaggio del Tevere finalizzato alla ricerca di reperti numismatici*, in *Archeologia e Informatica* (note 15, above).

17 For typical Tiber finds, see L. TRAVAINI, *Sito B: monete dallo scavo di Lungotevere Testaccio (anni 1979-1983)*, in *BollNum*, 5, 1985, p. 71-126.

18 Facoltà di Lettere e Filosofia della II Università degli Studi di Roma (Tor Vergata): *Informatica applicata alle scienze umanistiche*. The course is conducted by Prof. Salvatore Tucci, lecturer in computer-science in the Facoltà di Ingegneria. As well as treating of theoretical problems in information technology, the course offers a series of practicals: students are taught to choose program packages appropriate to their needs, to modify programs, and to write simple programs of their own.

computerisation of numismatic data during the second semester of 1990/91¹⁹. In the event, the course provided an exceptional opportunity for students to gain hands-on experience of computer operations, using material familiar to many of them from other courses.

The principal scope of Mr Volk's course was to introduce students to the use of the computer as a research-tool, rather than as simply an efficient means of preparing material for traditional forms of hard-cover publication. The exercises that formed the greater part of the course employed the database program *dBASE III PLUS*TM, probably the most widely used of PC-based packages and one already in use by a number of numismatic institutions. The numismatic structure was taken from the PC version of NUMiSmatica, the relational database originally developed for the Spanish Ministerio de Cultura's main-frame system²⁰. Work-sessions concentrated on the so-called nuclear or basic-entry file designed to accommodate the twelve concepts recommended by the Sub-committee for the Computerisation of Numismatic Data as elements essential to any numismatic database. Prepared exercises rehearsed the various facilities of the database package for ordering, retrieving, editing, and otherwise manipulating information. Two blocks of real data were initially made available to students: a listing of over a thousand ancient Greek coins from the Lewis Collection (Corpus Christi College, Cambridge) prepared for audit purposes and employing a shortened version of the basic NUMiSmatica entry format; and a detailed research-file, incorporating a number of NUMiSmatica's extended sub-files, based on the holdings of silver *denarii* of the emperor Augustus in the Gabinet Numismàtic de Catalunya, Barcelona.

The experience thus gained was then applied by the students to create a trial database for the Tiber finds. This was installed on the Cattedra's existing hardware, an *IBM AT*TM personal computer running *MS-DOS*TM. The data to be entered were taken from the draft manual entries prepared the previous year as part of the preliminary sorting of the material. A primary purpose of the exercise was to determine how far «traditional» structures and formulations were compatible with efficient retrieval of data using the database package. In particular, entries were tested for consistency of expression and for their suitability for the construction of meaningful indexes. During an optional research seminar held during the post-examination period, a further test of the database and its structure was provided by importing a very different type of material from that derived from the Tiber. This was the catalogue of coins which Rosa Maria Nicolai had put on computer for her degree-project *Le monete emesse tra il 44 e il 27 a.C. dalla collezione Gneccchi nel Museo Nazionale Romano*²¹. The immediate contrast between the two groups of material lies in the generally excellent condition of the coins catalogued by Dr. Nicolai and in their homogeneity. That the latter material formed part of an established museum collection meant, too, that she had established dedicated fields for classes of «administrative» data not applicable to the Tiber finds.

The underlying question posed by the research seminar was the extent to which standardisation of databases was compatible with the different objectives set for each project. In the case of the Tiber material, the immediate requirement is seen as the creation of a research-database. This is understood to be the principal tool for the analysis and sorting of the material that must constitute the first stage of its interpretation. The current version of the IPZS's data-capture program, on the other hand, is aimed primarily at the practicalities of publication, and in particular the preparation of texts for catalogue-entries to accompany illustrations of the material, whether in the form of a printed volume in the

¹⁹ Dipartimento di Storia, Facoltà di Lettere e Filosofia della II Università degli Studi di Roma (Tor Vergata): *Informatica applicata alla numismatica - nuovi metodi per la catalogazione di materiale numismatico*. Practical sessions were conducted in the seminar room of the Centro dei Calcoli, where an industry-standard PC was available between every two students taking the course.

²⁰ See Study A, above.

²¹ Tesi di laurea (1991), Facoltà di Lettere e Filosofia della II Università degli Studi di Roma (Tor Vergata).

Bollettino di Numismatica series, in which text and illustration are shown side-by-side, or as the support for digitised images held on CD-ROM²².

The challenge, therefore, has been to see whether it is possible to reconcile these different approaches, while at the same time retaining a format that can be applied by students after relatively little practice and without any particular expertise in information technology. Our attempts at creating a working-model (TEVERE) for handling the Tiber finds are described in the following sections²³. In no sense is this offered as a final solution. It is an evolving program which is subject to regular review. As the volume of material entered on the database increases, so we shall continue to test that we are able to gain from the system precisely what we need from it. Modifications have been, and will continue to be made, whenever they prove necessary.

2. *Creating a working-model* (M. MARCONI)

2. 1. *Specification*

The TEVERE database is intended primarily as a research-tool. In view of the poor condition of most of the specimens, the scientific value of the Tiber finds does not lie in individual pieces viewed in narrowly numismatic terms. Rather, their interest is as a complex of material that can be compared with other accumulations from the same source and with similar finds from elsewhere. We recognised that the scope for such comparisons or contrasts would normally comprise not a single criterion, but multiple criteria which vary according to the period of issue and according to the nature of the intended study. For example, a study of differential circulation of the various base metal values of the Augustan system might incorporate a search for the «weight», «degree of wear», «completeness», and «denomination» for «AE» coins of the «Roman Empire» issued «before A.D. 193».

For these purposes a multifaceted electronic database offering rapid sorting and matching facilities across a range of concepts has considerable advantages over manual systems of data storage and traditional publication formats. Such systems and formats necessarily order or index entries in a single sequence, as for example by date of issue or by place of minting, and depend for their flexibility (if any) upon predetermined indexes of single concepts, such as «ruler», «mint», «type», and «legends».

To achieve the desired results, a number of requirements were set of the intended system. The structure of the database had to be sufficiently articulated to allow relatively complex questions of the kind noted above to be asked. Given the number of specimens to be catalogued, it was also important that data should be entered in such a way that the data-bank could be searched for one or more «conditions» (selection criteria) without producing an excessive number of over-laps or non-matching results. So, too, a «syntax» was required which would allow fields to be indexed both for purposes of consultation (for example chronological order of issue, alphabetical order of place of production, etc.) and for ease or speed of operation. A corollary of these requirements was the need to devise procedures which would ensure that so far as possible entries were completed systematically and consistently. Finally, the database had to function as a resource in its own right and not merely as an adjunct to a set of illustrations. This was not to preclude the eventual publication of the finds either in standard *BdN* hardback format or on CD-ROM, but to make the data immediately available for interpretative studies.

²² See the CD-ROM applications demonstrated by the IPZS/Ministero per i Beni Culturali e Ambientali at the Congrès.

²³ The development of the current Tevere database/entry-screen is owed, in particular, to Michela Marconi, Rosa Maria Nicolai, and Massimiliano Tonsini.

2. 2. Relational database

Our starting-point was the idea of a relational database. This offered a solution to two problems of economy. One concerned the absolute number of records. In addition to our current stock, it seemed prudent to allow for the future expansion of the data-bank to accommodate information on finds made after 1988. At the same time, it was evident that the range or depth of information to be compiled was not going to be the same for every specimen. In particular, it was intended that selected coins should be analysed to determine their metal composition and that these data should also form part of the computerised document. In a database package such as *dBASE*, TEVERE's host-package, each record consumes the same amount of memory whether or not all its fields are completed. A single format designed to meet every eventuality is therefore likely to be very wasteful. It also risks slowing operations. Thus, the greater the number of records, the more desirable it becomes to group different areas of information in separate files, rather than to enter all data in a common file.

To meet our needs, we decided to construct a relational database based on NUMiSmatica²⁴. A record for every Tiber specimen would be created on a descriptive core-file [scheda-nucleo]. This would comprise fields or concepts sufficient to constitute a basic inventory of the material. Separate files were envisaged for the results of metal-analyses and detailed conservation reports, for administrative data, and for the bibliography used in the compilation of the core-file or of either of the two supporting sub-files.

2. 3. Articulation of the core-file

The structure of the Tiber database owes much to exercises undertaken during the teaching course. These employed two NUMiSmatica-based files: a very simple inventory-like file which had been designed to provide an audit or check-list of Classical and Hellenistic Greek coins in the Lewis Collection at Corpus Christi College, Cambridge (LEWIS); and a much more complex research file incorporating detailed catalogue entries for *denarius* issues of Augustus in the Gabinet Numismàtic de Catalunya, Barcelona (AUGCAT).

The descriptive component of the LEWIS file is limited essentially to eight fields, of which the most important is an Identification string. These eight fields, together with NUMiSmatica's standard organisational fields and a number of supplementary descriptive fields which in practice were rarely used, occupies 656 bytes of memory per record. The AUGCAT file, with its greater articulation, comprises 82 fields and occupies 1662 bytes per record. Among other additional concepts it provides dedicated fields for the qualification or expansion of the information contained in the Identification string and for descriptions of types and legends.

Applying the lessons learnt from handling data in the LEWIS and AUGCAT files to the particular needs of the Tiber material, we proceeded to create an experimental core-file, to which we gave the name BASIC. It comprises 128 fields, the maximum number permitted under *dBASE III PLUS*, and each record occupies a total of 2194 bytes. BASIC is composed of three elements: the twelve basic concepts recommended by the Sub-committee for the Computerisation of Numismatic Data; extension paragraphs dealing with detailed aspects of Classification; and standard organisational or file-management fields (including reliability sub-fields) drawn directly from NUMiSmatica.

BASIC's entry-format or mask, which is made up of a sequence of four screens or «pages», is organised along the lines of a typical NUMiSmatica file (Fig. 5: «scheda-nucleo (0)»). The first section is intended primarily for organisational data such as the Reference-key [RIFERIMENTO], which both defines in broad-brush terms the class and culture of the object to be catalogued and provides that object with a unique identifier, and

24 See Study A, above.

the Source of the data, which here includes the number of the draft catalogue-sheet previously employed to list a sample of the finds. The later part of the mask corresponding to the fourth «page» is, for the most part, similarly dedicated to organisational data. The Expansion field [AMPLIFICAZIONE] is used to flag the presence of relevant data in any of the sub-files which together with the core-file itself constitute the full object-document. The Image-store field [MEMORIZZAZIONE IMAGINE], here employed for the first time in a NUMiSmatica-type file, is intended for the «frame»-number or code either of a fully digitised image of the object or of an analog-source (for simplicity, the reference is to the obverse-image only). The file is completed by paragraphs for Notes [NOTE] and for Compilation and Editing information. The former is intended for additional data and/or any commentaries which are not suited to being entered elsewhere in the core-file or on one of the document's sub-files. Rather than choosing the «Memo» option, we defined Notes as a standard alpha-numeric field. Although this limited the number of characters to 256, it has the advantage of permitting the text to be searched both globally and as a single field. Under *dBASE III PLUS*, however, the length of the Notes field means that it cannot be indexed.

The descriptive element of BASIC is built round the twelve concepts derived from the Milan and Madrid meetings of 1984 and 1985: Conventional Identification, Status, Total, Dating, Summary Description, Standard Reference, Material, Denomination, Weight, Remarks, Diameter, and Die-axis²⁵. The elaboration of these concepts as a set of dedicated fields follows the standard NUMiSmatica format. In addition to these basic or essential concepts, we followed the AUGCAT file in incorporating within the core-file itself substantial parts of the various extension paragraphs which comprise NUMiSmatica's Classification sub-file. This solution was judged more appropriate to the Tiber material than one based on relational access to a self-contained sub-file, since the intended research applications of the database meant that we considered that the data for all specimens were «essential». There were also operational advantages in incorporating the expansion fields in the core-file, since under a «Set Relation» command the material can be ordered according to the indices of only one of the files specified in the command, whereas within a single file several fields can be combined (subject to an overall length of one hundred characters) for indexing purposes.

The additional fields cover various aspects of Issuing Authority [AUTORITÀ EMITTENTE], Place of Minting [ZECCA], and Issue [EMISSIONE]. The first of these paragraphs covers both geographical and temporal elements. Thus, the State [Stato] may be located by reference to appropriate geo-political units, such as the divisions of the Roman Empire which have been used since the time of the abbé Eckhel to order the Greek cities, and dated by reference to, say, a dynasty (at Sub-series [Subserie]), ruler or government (at Period [Periodo]), or the year marked on the object itself (Year [Anno]). Note that this last figure will not necessarily be the same as the common era date entered in the Dating paragraph [CRONOLOGIA]. The concept of Mint can similarly be qualified by location. Thus, mints of the later Roman Empire may be defined at Zone [Zona] as either «Western» or «Eastern», both to facilitate search operations based upon overviews of either group which might otherwise require the keying-in of each mint individually and to allow for the fact that the poor condition of many of the Tiber specimens may permit the place of minting to be identified with no greater precision than by zone or region. The Issue paragraph comprises five multi-purpose fields, the scope of which can be indicated in the «category» sub-fields which precede them. This is because what constitutes an «issue» varies according to the class and period of coinage (for example magistrate's name, symbol, weight-standard, form of titulature, etc.). To provide dedicated fields for every eventuality would be both cumbersome and expensive of memory.

The opportunity to qualify the reliability of data provided by sub-fields marked on the mask by the parentheses «[]» is discussed below (§ 2. 6. *Reliability*).

25 See Study A. above, § 5. *Basic concepts*.

BASIC scheda-nucleo (0)

| | | | | |
|---|----------------|---------|----------|-------|
| RIFERIMENTO (Record) | | | UTILITÀ | |
| File tipo | Classe oggetto | civiltà | Status | Grado |
| Nome | Entità | Oggetto | Versione | |
| RIFERIMENTO CROCIATO (File tipo/banca dati) | | | | |
| NUM/Smatica | | | | |
| FONTE: Status | | | | |
| Documento : n rif testo | | | | |
| N. Reg./Cat. (Collezione/doc.) | | | | |
| IDENTIFICAZIONE | | | | |
| Conven.le [] | | | | |
| AUTORITÀ EMITTENTE: | | | | |
| Zona [] | | | | |
| Regione [] | | | | |
| Settore [] | | | | |
| Stato [] | | | | |
| Serie [] | | | | |
| Subserie [] | | | | |
| Anno [] | | | | |
| Era [] | | | | |
| ZECCA | | | | |
| Zona [] | | | | |
| Regione [] | | | | |
| Luogo [] | | | | |
| Nome [] | | | | |
| EMISSIONE: | | | | |
| 1 [] | | | | |
| 2 [] | | | | |
| 3 [] | | | | |
| 4 [] | | | | |
| 5 [] | | | | |
| STATUS | | | | |
| Stat1 [] | | | | |
| Stat2 [] | | | | |
| TOTALE: | | | | |
| Totale | | | | |
| Subtotale | | | | |
| CRONOLOGIA | | | | |
| Da [] | | | | |
| Fino [] | | | | |
| Accuratezza | | | | |
| Conven.le [] | | | | |
| Precisa [] | | | | |
| DESCRIZIONE (Sommario) | | | | |
| DIRITTO | | | | |
| Leggenda [] | | | | |
| Tipo [] | | | | |
| ROVESCIO | | | | |
| Leggenda [] | | | | |
| Tipo [] | | | | |
| TAGLIO [] | | | | |
| BIBLIOGRAFIA STANDARD | | | | |
| N. Rif | | | | |
| Testo | | | | |
| pg. iv n acc.zza | | | | |
| MATERIA | | | | |
| Abbr. [] | | | | |
| Testo [] | | | | |
| NOMINALE: | | | | |
| [] | | | | |
| TECNICA | | | | |
| Peso : attuale [] | | | | |
| g | | | | |
| Osservazioni : [] | | | | |
| codici [] | | | | |
| testo [] | | | | |
| 2 [] | | | | |
| 3 [] | | | | |
| Diametro [] | | | | |
| mm (x [] mm) | | | | |
| Pos. conii [] | | | | |
| AMPLIFICAZIONE (Sub-schede) | | | | |
| MEMORIZZAZIONE (IMAGINE) | | | | |
| N. posa (dir.) | | | | |
| NOTE: | | | | |
| COMPILAZIONE | | | | |
| Nome | | | | |
| Data / / | | | | |
| REDAZIONE | | | | |
| Nome | | | | |
| Data / / | | | | |

Fig. 5. Standard or long-format mask for BASIC [scheda-nucleo (0)].

2.4. Data capture

The primary purpose of this prototype file was to test the suitability of our chosen fields, to determine whether our definitions of their respective types as numeric or character-based (i.e. alpha-numeric) and our calculations of their length were appropriate, and to establish efficient data-entry procedures. To do this, members of the course created BASIC records for a selection of pieces catalogued the previous year on traditional sheets.

From these trials it was evident that the perceived complexity of the core-file's articulation presented difficulties. The problem was two-fold. BASIC's more systematic presentation of the data-categories compared with traditional listings, was found by some students to be slightly intimidating. The more serious objection, however, was that completing a full entry for each coin as it came (i.e. according to the arbitrary order by which the material had been transferred to the Cattedra di Numismatica) was both time-consuming and susceptible to inconsistency of expression. To achieve the most efficient

BASIC scheda-nucleo (1b)

| | | | | |
|--------------------------------|----------------|---------|----------|-------|
| RIFERIMENTO (Record) | | | UTILITÀ | |
| File tipo | Classe oggetto | civiltà | Status | Grado |
| Nome | Entità | Oggetto | Versione | |
| FONTE: Status | | | | |
| N. Reg./Cat. (Collezione/doc.) | | | | |
| IDENTIFICAZIONE | | | | |
| Conven.le [] | | | | |
| Serie [] | | | | |
| Subserie [] | | | | |
| STATUS | | | | |
| Stat1 [] | | | | |
| Stat2 [] | | | | |
| TOTALE [] | | | | |
| Subtotale [] | | | | |
| CRONOLOGIA | | | | |
| Da [] | | | | |
| Fino [] | | | | |
| Accuratezza [] | | | | |
| Conven.le [] | | | | |
| Precisa [] | | | | |
| MATERIA | | | | |
| Abbr. [] | | | | |
| Testo [] | | | | |
| NOMINALE [] | | | | |
| TECNICA | | | | |
| Peso : attuale [] | | | | |
| g | | | | |
| Osservazioni : [] | | | | |
| codici [] | | | | |
| testo [] | | | | |
| Diametro [] | | | | |
| mm (x [] mm) | | | | |
| Pos. conii [] | | | | |
| BIBLIOGRAFIA STANDARD | | | | |
| N. Rif | | | | |
| Testo | | | | |
| pg. iv n acc.zza | | | | |
| AMPLIFICAZIONE (Sub-schede) | | | | |
| MEMORIZZAZIONE (IMAGINE) | | | | |
| N. posa (dir.) | | | | |
| NOTE: | | | | |
| COMPILAZIONE | | | | |
| Nome | | | | |
| Data / / | | | | |
| REDAZIONE | | | | |
| Nome | | | | |
| Data / / | | | | |

Fig. 6. Short-format mask for BASIC/BASICX [scheda-nucleo (1b)].

BASIC scheda-nucleo (2)

| | | | | |
|--------------------------------|----------------|---------|----------|-------|
| RIFERIMENTO (Record) | | | UTILITÀ | |
| File tipo | Classe oggetto | civiltà | Status | Grado |
| Nome | Entità | Oggetto | Versione | |
| FONTE: Status | | | | |
| N. Reg./Cat. (Collezione/doc.) | | | | |
| IDENTIFICAZIONE | | | | |
| Conven.le [] | | | | |
| AUTORITÀ EMITTENTE: | | | | |
| Stato [] | | | | |
| Serie [] | | | | |
| Subserie [] | | | | |
| Periodo [] | | | | |
| ZECCA | | | | |
| Zona [] | | | | |
| Regione [] | | | | |
| Luogo [] | | | | |
| EMISSIONE: | | | | |
| 1 [] | | | | |
| 2 [] | | | | |
| 3 [] | | | | |
| STATUS | | | | |
| Stat1 [] | | | | |
| Stat2 [] | | | | |
| TOTALE: | | | | |
| Totale | | | | |
| Subtotale | | | | |
| CRONOLOGIA | | | | |
| Da [] | | | | |
| Fino [] | | | | |
| Accuratezza | | | | |
| Conven.le [] | | | | |
| Precisa [] | | | | |
| MATERIA | | | | |
| Abbr. [] | | | | |
| Testo [] | | | | |
| NOMINALE [] | | | | |
| TECNICA | | | | |
| Peso attuale [] | | | | |
| g | | | | |
| Osservazioni : [] | | | | |
| codici [] | | | | |
| testo [] | | | | |
| 2 [] | | | | |
| 3 [] | | | | |
| Diametro [] | | | | |
| mm (x [] mm) | | | | |
| Pos. conii [] | | | | |
| DESCRIZIONE (Sommario) | | | | |
| DIRITTO | | | | |
| Leggenda [] | | | | |
| Tipo [] | | | | |
| ROVESCIO | | | | |
| Leggenda [] | | | | |
| Tipo [] | | | | |
| BIBLIOGRAFIA STANDARD | | | | |
| N. Rif | | | | |
| Testo | | | | |
| pg. iv n acc.zza | | | | |
| AMPLIFICAZIONE (Sub-schede) | | | | |
| MEMORIZZAZIONE (IMAGINE) | | | | |
| N. posa (dir.) | | | | |
| NOTE: | | | | |
| COMPILAZIONE | | | | |
| Nome | | | | |
| Data / / | | | | |
| REDAZIONE | | | | |
| Nome | | | | |
| Data / / | | | | |

Fig. 7. Intermediate-format mask for BASIC/BASICX [scheda-nucleo (2)].

use of the *dBASE* package, «similar» coins should so far as possible be entered during the same working session. In that way the fullest use may be made of the package's «Set carry on» and «Replace» commands. Ideally, some capacity to pre-sort the material before completing the full entry is therefore desirable. Note, however, that even if the procedure is slightly more cumbersome, «new» records can also be entered at an appropriate place within the database by means of a simple «Insert» command or be created from data derived from the immediately preceding «old» record by combining the latter command with «Set carry on».

To meet the problem we sought to develop procedures which would allow records to be compiled by stages. In addition to the original entry-format corresponding to the whole of the BASIC file, two new formats were prepared: a short format (BASIC1) of 71 fields of a total length equivalent to 871 bytes per record (Fig. 6: «scheda-nucleo (1b)») and an intermediate entry-format (BASIC2) of 109 fields equivalent to 1702 bytes per record (Fig. 7: «scheda-nucleo (2)»). Staged compilation can be implemented in two ways. The simpler procedure is for the three formats to support a common database. In that way the compiler can easily switch from one format to another according to the needs of the material or the amount of data available. The short and intermediate formats do not, however, offer any saving of memory compared with the original format, as each entry regardless of the size of the mask used to capture the data forms a standard 2194 bytes BASIC record. The alternative solution (followed during our trial) is to establish the three formats as distinct databases; here BASICX.DBF corresponded to «scheda-nucleo (1b)» and BASICY.DBF to «scheda-nucleo (2)». Since each is a self-standing database, formats cannot be switched at will. Records can, however, be upgraded by using a higher level database to «Append» records from a lower one. Moreover, since records may be «appended» selectively, upgrading may be combined with a re-sort of the default order of the records. But the immediate benefit is the saving of memory achieved by using BASICX or BASICY records, compared with those entered directly on BASIC.

The selection of fields used to create the BASICX file corresponds approximately to the inventory-like structure of LEWIS. It comprises Conventional Identification, Conventional Dating, and Standard Literature, together with sufficient information to identify the individual specimen (usually Weight). The file was used to create preliminary entries for the balance of the material previously recorded on traditional catalogue-sheets. The amount of description employed at this stage was sufficient for a quick re-sort. This in turn made possible the transfer of batches of related materials to BASICY by means of the «Append» command. Thus, the identified Flavian issues were extracted from BASICX *en bloc* and assigned to the present writer to process on BASICY. This intermediate stage included the addition of a Summary Description of the legends and types and, where appropriate, the creation of «master-records» (see *Study II*, below). Concentrating efforts on one narrow series at a time resulted in faster compilation and greater consistency of expression.

2. 5. Terminology and Syntax

Given that the database is intended to handle upwards of 6,000 coins, a measure of control in the compilation of records is essential. Efficient searching of the database means being able to recover all the records relevant to the enquiry, while at the same time ensuring that valid results are not obscured by a mass of mismatches. The usual solution is to prescribe tight terminological controls, whether at the input stage or by programming the database to recognise equivalent expressions (compare the use spell-check programs with word-processing packages). Here, however, the essentially heterogeneous character of the Tiber finds effectively precluded the preparation of an *a priori* listing of all the possible terms. We therefore sought a more flexible approach, using the database itself as a test-bed for grammatical and verbal experiments.

The provisional basis of our rules for compilation is current Italian numismatic usage modified by an acceptance of multiple terms, skeletal descriptions, and a limited

number of conventional uses of punctuation-marks and other symbols (Fig. 8 : selection of reverse types).

Libertà <Libertas> (s) seduta + [s] scettro, [d] ramoscello/pileo <pileus>
 Libertà <Libertas> (s) stante + [d] pileo <pileus>, [s] scettro
 Pace <Pax> (s) seduta + [d] ramoscello, (s) caduceo <caduceus>
 Vespasiano <Vespasianus> (d) seduto : + [s] ramoscello, [d] scettro
 attribuiti sacerdotali (simpulo <simpulum> : "aspergillum" : brocca; lituo <lituus>
 militare <imperatore> (d) riceve victoriola (!) <Victoria; Vittoria> da Giove <Juppiter> (s)
 prora-nave (d)
 rami/alberi-alloro (2)
 scrofa (s); porcelini (3)

Fig. 8. Selection of summary reverse types in index-order (Tevere).

Where more than one term is in current usage for the same idea, these second or third terms are enclosed by the parenthetical marks "< >". Thus, in the LEWIS database the silver unit of Corinth is entered at the Denomination field in the form «stater <tridrachm>», allowing the record to be recovered under either term. In the case of the Tiber material, we have used this convention to employ both Latin and vernacular Italian terms for significant elements in the descriptions of Roman coins. One reason for this is to facilitate future exchanges between our database and listings of finds from other areas of the Roman Empire. Where this is merely a matter of a word's termination, the introduction of synonyms or equivalent expressions is not strictly necessary: «sest» can be used indifferently to recover the terms «sesterzio» and «sestertius», (though not the abbreviation «HS»). The need is most keenly felt in the case of personal names or other proper nouns where the transformation affects the initial letters: «Adriano <Hadrianus>», «Cesare <Caesar>», «Giove <Juppiter>», etc. There is, however, a certain cost to this. Although the inclusion of a second term does not itself occupy extra memory, the field lengths may have to be longer than they might otherwise be in order to accommodate synonyms.

Given our overriding aim of a research database capable of rapid and precise searches, the summary descriptions of the types included in BASIC and BASICY are constructed in index-form, rather than in the traditional literary style. This preference is reflected both in the content of the descriptions and in the order in which the various elements are presented. Thus the form «Vespasiano : testa» is preferred to «Testa di Vespasiano» in order to avoid an eventual index of thousands of obverse types under either «busto» or «testa», rather than the substantive type. Attributes are introduced by «+» (for example «testa + corona-quercia» rather than «testa coronata di quercia») and explanatory qualifications contained by the parentheses «()» (for example «attribuiti sacerdotali (simpulo <simpulum>; aspergillum»; brocca; lituo <lituus>).

Mismatches occur where the condition specified in a search is present in the chosen field but in a sense or context different from that intended by the enquirer. This is most likely to happen in the case of simple terms such as «left» [sinistra] and «right» [destra]. Compare a traditional description «Minerva galeata stante a sin. con Vittoria nella d. e asta rovesciata nella sin.; ai suoi piedi, scudo ovale a sin. e trofeo a d.», where «sin.» (for «sinistra») occurs in three senses : «facing left», «in left hand», and «in left field». Were we to enter the text on BASIC as it stands, a future enquiry with the conditions «Minerva» and «a d.» for «Minerva to r.» would include the present record, although here Minerva stands to left. For the computer, however, the match would be valid, because «a d.» occurs in the definition of the trophy's location. The confusion can be avoided by giving the condition in a form which matches the original description word for word, but there is a risk that it will not always be possible to second-guess the compiler's precise formulation of any one description. Our working solution has been to differentiate the various senses of such words as «sinistra» and «destra» by the use of different styles of parentheses. Thus «(s)» corresponds to «facing left», «[s]» to «in left hand», and "«s" to «in left field».

A corollary of using structured descriptions, particularly where they include «coded» forms such as those for the various definitions of «left» and «right», is the need for procedures to ensure consistency. This is partly met by the use of «master-records» and the package's various facilities for copying common elements from one record to another. But the single most helpful facility is the «Browse» mode, which enables the compiler to compare records on a field by field basis. Where the records have been organised in appropriate batches, regular use of the «Browse» mode should help to reveal anomalous usages in the descriptions.

2. 6. Reliability

A feature common to all three file-formats (BASIC, BASICX, and BASICY) are the sub-fields used to record the reliability of the information entered in each of the substantive data-fields. Provision of reliability codes is not intended as a reflection on the scholarly competence of the compilers. Genuine uncertainty attaches to many statements in numismatics, whether arising from the current state of scholarship or because the particular specimen is too poorly preserved to be the subject of an unqualified statement. The latter condition applies to very many of the Tiber finds.

The completion of the «reliability» sub-fields is not compulsory. Their format is alpha-numeric; if no entry is made, they appear blank. They are intended to handle in a systematic way qualifications which in conventional cataloguing are conveyed either symbolically (for example by «?») or by circumlocutions. The reliability data are encoded both to save space and to permit a precision which is difficult to express by means of traditional usages. Symbols such as «?» may still be used in most data-fields. They must, however, follow the word or expression which they are intended to qualify, since placing them at the start of a word will alter that word's position in any index generated by the database. Generic doubt applying to all specimens of a given class or group is indicated by «(?)»; doubt or uncertainty specific to the individual specimen by «?». A space between the symbol and the word that immediately precedes it indicates that the doubt attaches to the whole of the preceding expression. Note, however, that neither symbols nor literary qualifications can be introduced into any field formatted for numerical expressions only (for example Year, Total, Sub-total, Weight, etc.); their conversion from numeric to character (alpha-numeric) format would mean that they could no longer be sorted by purely arithmetical criteria. In these cases, the «reliability» sub-fields provide the only means of qualifying the data-statement.

The «reliability» code comprises two elements. The «quality» of the statement made in the field it qualifies: «0» = unqualified; «1», «2», and «3» = (respectively) probable, possible, doubtful in respect of the individual specimen; «4», «5», and «6» = (respectively) probable, possible, doubtful in regard to that class or group as a whole; «7» = frozen or immobilised; «8» = traditional or conventional; and «9» = provisional. The second position is used to comment on the form or status of the statement in the corresponding main field: «0» = simple; «1» = equivalent or another way of saying the same thing; «2» = alternative or one of two or more possible options; «3» = approximate; «4» = less than or before; «5» = less than or equal to/in or before; «6» = greater than or after; «7» = equal to or greater than/in or after; «8» = reported; and «9» = erroneous.

The poor condition of much of the Tiber material lends particular importance to another feature borrowed from NUMiSmatica. This is the statement of Accuracy [Accuratezza] which is available to qualify the Dating fields [CRONOLOGIA] and the citation of Standard Literature [BIBLIOGRAFIA STANDARD]. Both are areas where traditional cataloguing practice is often ambiguous or imprecise. For example, a chronological citation might typically be formulated «c. 300-212». Does the cataloguer intend that both the opening and the closing dates should be understood as approximate? Or is the opening date approximate and the closing date secure? The two positions of the Accuracy code invite the compiler to comment separately on the two dates: «33» indicates that both are approximate; «30» that the second meaning is intended.

The individual time-concepts covered by the Accuracy field for Dating total seven, each of which (with the exception of «1») can be used in combination with either itself or with one of the others to provide a simple, but accurate qualification: «0» = the year as stated; «1» = during the course of a single year; «3» = approximately; «4» = before; «5» = in or before/*terminus ante quem*; «7» = in or after/*terminus post quem*. In addition, there is a third position after the comma. This is to indicate whether the period cited is to be understood as comprehending the particular point of production («0») or whether the period cited is to be understood as one during which the coinage was produced more or less continuously («2»). The code «1» in this position is used for a period contained within a single year.

The same principles lie behind the Accuracy code qualifying bibliographical citations. A traditional reference citation might take the form «*RIC* 23var.». It is not immediately clear from this whether the variation applies to the received description of the obverse type/legend or to that of the reverse type/legend. The two positions of the Accuracy code refer, respectively, to obverse and reverse: thus, «20» indicates an obverse variety and «02» a reverse variety.

The bibliographical citation codes are not unlike those used in the corresponding field for exactness of Dating (for example in both sets «3» conveys the same sense of approximation): «0» = as described; «2» = variant of; «3» = approximately as described/similar to (for example in the case of a difference of posture too minor to be considered a substantive variety); «4» = of the same general type as (for example in the case of a coin too poorly preserved to allow of «0», «2», or «3»); «5» = copy of/imitation after; «6» = correction of the published text (where the published description contains a misprint or obvious impossibility); «7» = same die as; and «9» = hybrid. Many of the sixty-four possible combinations cannot occur; so, «99» would be meaningless.

3. Customising the system (M. TONSINI)

3.1. Re-evaluation

As the number of completed records has increased, so the working-model of BASIC has been subjected to frequent critical review. The aim has been to use our initial experience based on general applications to refine or to customise the database to meet the specific needs of the Tevere project.

Three areas of immediate concern were identified. The amount of computer-memory currently available to the project was finite; not only had we to be sure that there was space for all our records to be entered on the same system, but that the volume of data did not exceed the amount which the computer's processor could handle with reasonable speed. Secondly, more time would be required to complete the project than the period during which students who had attended the original course would be available to enter records and there was no guarantee that similar teaching could be offered to future student classes. It was therefore essential that the process of inputting data should, so far as possible, be easily attainable by students having no previous cataloguing experience with computers. Thirdly, there remained a number of important differences between the structure of the NUMiSmatica-based working-model and the corresponding data-capture program developed by the IPZS²⁶.

Each of the three foregoing concerns is to be understood in terms of our short-term needs. We recognised that the long-term solution to the question of memory and processing power lay in an eventual up-grading of the Cattedra's hardware. Similarly, the development of more user-friendly entry practices could be achieved by adopting procedures based on such facilities as dedicated «function-keys», «macros», and «pull-down» or «pop-up» menus which would enable the uninitiated to complete many of the

descriptive fields by using the cursor to check the appropriate (predetermined) choice²⁷. We have, however, concluded that developing such a system is better effected on the basis of a relatively large body of completed entries, rather than on simple *a priori* assessments of what is required. Finally, the IPZS's database is itself an evolving system which can be expected to assume increasingly sophisticated research applications so that our two systems will tend to converge as our aims move closer to one another.

3. 2. Revised structure

Discussion of a revised core-file foresaw completion of the initial sorting of the Tiber material described in § 2. 4., above. The key to simplifying the future operation of the system was seen to be the consolidation of the principal elements of the three stages of the BASIC series into a single database. Although the aim was a combined file, the option of supporting this with more than one entry-mask would remain.

Our point of departure was the «intermediate» file, BASICY.DBF. Customising its articulation to match ever more closely the needs of the Tevere project concentrated on three elements : eliminating a number of fields perceived to lack relevance to a majority of the Tiber finds, shortening the lengths of others, and aligning yet others to the pattern of the IPZS's database in order to facilitate future publication of the material in *BdN*. Each of the proposed changes required the most careful scrutiny. Certain revisions, attractive on immediate consideration, were found to have unexpected implications for the speed and precision of research-based enquiries and were subsequently dropped. On a trial-and-error basis, agreement was finally reached on a new common core-file; to this we gave the name TEVERE.DBF. It comprises 110 fields (including those hidden from the mask), totalling 1678 bytes per record (Fig. 9 : structure of TEVERE.DBF; Fig. 10 : entry-mask for TEVERE [scheda-Tevere (1)]). There is no pretence on our part that this represents the definitive version of the database, but it is hoped that it will provide an efficient means of achieving what we see as the next stage of the project, viz. the accumulation of a substantial number of records.

The selection of fields for the TEVERE core-file is more or less identical with the structure of BASICY. A number of fields do not appear in the mask (e.g. SOURCE Status [FONTE Status] and MATERIAL Abbr. [MATERIA Abbr.]), but to facilitate the future integration of the Tiber finds with data held on other systems, they are retained in TEVERE's underlying structure. The cost of these hidden fields is fewer than 25 bytes per record. It was, however, possible to achieve a net saving of characters compared with the corresponding fields in the BASIC-system files, by using completed records to tailor the lengths of individual data-fields to the requirements of the Tiber material. The most significant loss from the list of descriptive fields employed for TEVERE is that for the Edge type or legend [TAGLIO]. This was omitted from BASICY, too, but there the compiler had the option of up-grading to the standard or long-format BASIC file. The decision to omit this field was based on the assumption that the edge description would be a significant feature of few (if any) of the 6,000 Tiber finds and that if required, this could be met on a case by case basis. Note, however, that Year [Anno] in the Identification paragraph is retained as a «hidden» field.

The principal differences between BASICY and TEVERE lie in our efforts to accommodate our file to the structure of the IPZS's database. It was also hoped that these modifications would help inexperienced students in compiling records. The most obvious change has been to split the transcription of the obverse and reverse legends into three dedicated fields for either side (outer circle [giro], field [campo], and exergue [esergo]). Under BASIC the various elements comprising the legend were given as a single string punctuated by the symbols «|» (outer circle), «/» (exergue), and «\» (field), following the order indicated by the sense of the original text. Combining these elements in a single

²⁷ Compare the use of *Clipper*TM to support the IPZS's system and the *FMRD* database demonstrated by Dr David Wigg (Frankfurt-am-Main/Mainz) during the Congrès.

Structure for database: C : tevere.dbf

| Field | Field Name | Type | Width | Dec | | | | |
|-------|------------|-----------|-------|-----|-------------|------------|-----------|------|
| 1 | FILE_TIPO | Numeric | 1 | | 62 | A029 | Character | 2 |
| 2 | CLAS_OGGTT | Character | 1 | | 63 | LEGG_DIRIT | Character | 58 |
| 3 | CLAS_CULTR | Character | 1 | | 64 | A029B | Character | 2 |
| 4 | RIF_PAESE | Character | 3 | | 65 | CAMP_DIRIT | Character | 48 |
| 5 | RIF_ENTITA | Character | 12 | | 66 | A029C | Character | 2 |
| 6 | RIF_OGGTT | Numeric | 9 | 3 | 67 | ESER_DIRIT | Character | 48 |
| 7 | RIF_VERSN | Numeric | 1 | | 68 | A030 | Character | 2 |
| 8 | UTILITA_ST | Numeric | 1 | | 69 | TIPO_DIRIT | Character | 100 |
| 9 | UTILITA_GR | Numeric | 1 | | 70 | A031 | Character | 2 |
| 10 | ENTITA_NOM | Character | 15 | | 71 | LEGG_ROVES | Character | 58 |
| 11 | FONT_ST | Numeric | 1 | | 72 | A031B | Character | 2 |
| 12 | FONT_NUMR | Character | 20 | | 73 | CAMP_ROVES | Character | 48 |
| 13 | A001 | Character | 2 | | 74 | A031C | Character | 2 |
| 14 | IDN_CONVEN | Character | 100 | | 75 | ESER_ROVES | Character | 48 |
| 15 | A005 | Character | 2 | | 76 | A032 | Character | 2 |
| 16 | AUT_STATO | Character | 60 | | 77 | TIPO_ROVES | Character | 100 |
| 17 | A006 | Character | 2 | | 78 | BIBL_CD | Numeric | 9 |
| 18 | AUT_SERIE | Character | 4 | | 79 | BIBL_TS | Character | 21 |
| 19 | A007 | Character | 2 | | 80 | BIBL_PAG | Numeric | 5 |
| 20 | AUT_SUBSER | Character | 26 | | 81 | BIBL_TAV | Numeric | 3 |
| 21 | A008 | Character | 2 | | 82 | BIBL_NUMR | Character | 7 |
| 22 | AUT_PERIOD | Character | 26 | | 83 | A034 | Character | 2 |
| 23 | A009 | Character | 2 | | 84 | BIBL_ACTZ | Character | 2 |
| 24 | AUT_ANNO | Character | 4 | | 85 | A035 | Character | 2 |
| 25 | A010 | Character | 2 | | 86 | MATERIA_CD | Character | 2 |
| 26 | ZECCA_ZONA | Character | 12 | | 87 | A036 | Character | 2 |
| 27 | A011 | Character | 2 | | 88 | MATERIA_TS | Character | 24 |
| 28 | ZECCA_REGN | Character | 32 | | 89 | A037 | Character | 2 |
| 29 | A013 | Character | 2 | | 90 | NOMINALE | Character | 42 |
| 30 | ZECCA_LUOG | Character | 24 | | 91 | PESO1 | Numeric | 6 |
| 31 | EMISS1_CTG | Character | 4 | | 92 | PESO2 | Numeric | 6 |
| 32 | A015 | Character | 2 | | 93 | A040 | Character | 2 |
| 33 | EMISSIONE1 | Character | 60 | | 94 | OSSER1_CD | Character | 3 |
| 34 | EMISS2_CTG | Character | 4 | | 95 | A041 | Character | 2 |
| 35 | A016 | Character | 2 | | 96 | OSSER2_CD | Character | 3 |
| 36 | EMISSIONE2 | Character | 60 | | 97 | A042 | Character | 2 |
| 37 | EMISS3_CTG | Character | 4 | | 98 | OSSER3_CD | Character | 3 |
| 38 | A017 | Character | 2 | | 99 | A043 | Character | 2 |
| 39 | EMISSIONE3 | Character | 60 | | 100 | OSSER_TS | Character | 42 |
| 40 | A020 | Character | 2 | | 101 | DIAMETRO1 | Numeric | 4 |
| 41 | STATUS1 | Character | 2 | | 102 | DIAMETRO2 | Numeric | 4 |
| 42 | A021 | Character | 2 | | 103 | A046 | Character | 2 |
| 43 | STATUS2 | Character | 2 | | 104 | POS_CONII | Numeric | 3 |
| 44 | TOTALE | Numeric | 3 | | 105 | AMPLIFICN | Character | 38 |
| 45 | SUBTOTALE | Numeric | 1 | | 106 | NOTE | Character | 210 |
| 46 | A023 | Character | 2 | | 107 | COMPIL_NOM | Character | 30 |
| 47 | ERA1_DA | Numeric | 1 | | 108 | COMPIL_DAT | Date | 8 |
| 48 | DATA1_DA | Numeric | 4 | | 109 | REDAZN_NOM | Character | 30 |
| 49 | A024 | Character | 2 | | 110 | REDAZN_DAT | Date | 8 |
| 50 | ERA1_FINO | Numeric | 1 | | ** Total ** | | | 1678 |
| 51 | DATA1_FINO | Numeric | 4 | | | | | |
| 52 | A025 | Character | 2 | | | | | |
| 53 | DATA1_ACTZ | Character | 4 | | | | | |
| 54 | A026 | Character | 2 | | | | | |
| 55 | ERA2_DA | Numeric | | | | | | |
| 56 | DATA2_DA | Numeric | 4 | | | | | |
| 57 | A027 | Character | 2 | | | | | |
| 58 | RA2_FINO | Numeric | | | | | | |
| 59 | DATA2_FINO | Numeric | 4 | | | | | |
| 60 | A028 | Character | 2 | | | | | |
| 61 | DATA2_ACTZ | Character | 4 | | | | | |

Fig. 9. Structure of TEVERE.DBF.

string has the practical advantage of enabling the compiler to view obverse or reverse legends in their entirety under the «Browse» mode. Although that is no longer possible with TEVERE, the complete legend can still be recovered under the «List» command²⁸.

The second significant modification affects the Technical Data [TECNICA] paragraph. Under TEVERE the previously multipurpose Remarks code-fields [Osservazioni : codici] have been dedicated to specific topics and their length increased to accommodate language-based codes. Thus, the first field is dedicated to manufacturing process [fabbricazione] (e.g. cast, hammered, machine-struck, etc.), the second to wear [usura], and the third to completeness [completezza].

| | | | |
|---|---------------------------------|------------------------------------|------------|
| TEVERE scheda: nucleo (I) | | | |
| RIFERIMENTO (Record) File-type 3 | Classe oggetto A civiltà I | UTILITTA Status 2 Grando 2 | |
| Pagine ITA Nome entità Tevere (1988) | Entità 12RM10000001 | Oggetto 6.001 | Versione I |
| SOURCE Status | N inv./prov. (coin-type) | D0015 | |

| | | | |
|---|------------------------|--------------------------------------|--|
| IDENTIFICAZIONE Convenire [] ROMN <imp> Adriano > Roma <zecca> | | | |
| AUTORITÀ EMITTENTE: | | | |
| Status | [] Roma | | |
| Serie | [] ROMN | Subserie [] impero | |
| Periodo | [] Adriano <Adrianus> | | |
| ZLCCA | Zona | [] Occidente | |
| | Regione | [] Italia centrale (Latium <Lazio>) | |
| | Luogo | [] Roma | |

| | | | |
|---------------------|--------------------|--|-------------|
| EMISSIONE | | | |
| 1) Nome | | [] Adriano <Adrianus> | |
| 2) Titl. | | [] Imp. Caesar Traian Hadrianus Avg p n i tr p co iii | |
| STATUS | | TOTALE | |
| Status | [] RG | Totale # | Subtotale I |
| CRONOLOGIA | Dati | Finito | Accumulate |
| Convenire | [] era I anno 117 | [] era I anno 138 | [] 1750 |
| Presca | [] era I anno 119 | [] era I anno 122 | [] 3330 |
| MATERIA | Testo | NOMINALE | |
| | [] AR | [] denaro <denarius> | |
| TECNICA | | | |
| Peso attuale | [] 2,59 g | prima di pulitura [] 0,00 g | |
| Osservazioni: labbr | [] MAR | usura [] LIS 3 compl [] | |
| testio | [] | | |
| Diametro | 18,5 mm (± 0,0 mm) | Pos. coin | [] 190° |

| | |
|-------------------------------|---|
| DESCRIZIONE (Sommaris) | |
| DIRITTO | |
| Leg. | [] ++07= [I] CAESAR TRAIAN II=ADRIANVS AVG' |
| giro camp | [] |
| eser | [] |
| Tipso alloro | [] Adriano <Adrianus> = busto (d) + vestito, testa (d) + corona |
| ROVESCO | |
| Leg. | [] ++07= [P] M = CPS III' |
| giro camp | [] |
| eser | [] LIB PVH |
| Tipso | [] Libertà <Libertas> seduta (s) + [s] scettro, [d] ramoscello ? |

| | | | |
|------------------------------|-----|----|--------------|
| BIBLIOGRAFIA STANDARD | | | |
| Testo | PR | LV | # |
| RIC 2 | 355 | I | 0127 [12] 04 |

| | |
|------------------------------------|---------------------|
| AMPLIFICAZIONE (Sub-schede) | |
| CL | ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ |

| | |
|---|--|
| NOTE * BIBL : RIC n.127 (+R = ramoscello) o n.128 (=R = piceo) | |
|---|--|

| | | |
|---------------|-----------------|---------------|
| COMPILAZIONE: | Nome Marconi, M | Data 16/07/91 |
| REDAZIONE: | Nome Volk, T R | Data 25/08/91 |

Fig. 10. Sample entry on TEVERE mask.

3.3. Compilation

Our review of compilation procedures concentrated on two areas, both of which were felt to contribute to the complexity of the system for students unfamiliar with electronic processing of data. These were the use of «reliability» codes and the use of skeletal or index-like type-descriptions in preference to traditional styles of literary expression. In the longer-term, one part of the problem can be met by employing an additional applications package to provide «pull-down» menus of any coded elements (whether the codes for «reliability» and «accuracy» or the sort of conventional punctuation used to differentiate the senses of such words as «left» and «right»). In the meantime, the number of «reliability» sub-fields has been reduced compared with those shown in BASIC-series files. Thus, data relating to weight and diameter entered in TEVERE are deemed to be accurate. It is, however, accepted that true uncertainty may attach to die-axis; accordingly, the corresponding sub-field has been retained. The general

28 The command for the combined obverse legend follows the form : «list» «b» + trim(legg_dirit) +
«\» + trim(camp_dirit) + «/» + trim(eser_dirit).

conclusion was that students should be allowed to complete those parts of the record which they felt able to tackle and to leave to the editorial stage some of the decisions over «reliability» and any adjustments to type-descriptions necessary to fit them to whatever form is finally agreed.

4. *Conclusions* (T.R. VOLK)

The didactic purpose of the Tor Vergata course was amply satisfied by the critical debate which the development of the working-model engendered amongst the participating students. Nor were the practical results negligible. The database file presented here offers, it is hoped, a useful point of reference not only for the study of the Tiber finds, but also for similar projects elsewhere.

The evolution of the TEVERE file through a process of application and review underlines the «interactive» aspect of database construction. All of us recognised that the process is a continuing one and that the present design represents no more than a particular stage of development. Three dilemmas, in particular, remain largely unresolved. Underlying much of the discussion were competing demands for «simplicity» of compilation and the «completeness» of information judged necessary for research purposes. So, too, we were concerned with the need to accommodate customary forms of numismatic expression, especially in describing types, to the need for rapid and precise recovery of information from a potentially large database. Finally, there was a recognition that electronic entries in a research database no longer had as their main application the presentation of whole records (whether or not supported by a pair of images) in the manner of the traditional printed catalogue, but that their likely use was as a basis for searching a single concept or combination of concepts for so many specimens as matched the selection criteria. One implication of this last is that each main concept should be self-standing with regard to any «reliability» qualification. Nor should the storing of images be seen as the answer to all our prayers. The picture undoubtedly scores for accuracy over a verbal description of the detailed articulation of types or of every variety of posture, but for most purposes the key to searching image-supported records is still a text-based description.

II. *Master-records : a contribution to computer cataloguing (Summary)*²⁹ (T. R. VOLK)

1. *Introduction*

The term «master-record» is used to describe a set of procedures intended to adapt cataloguing practices long familiar from traditional numismatic publications to the requirements of computerised databases. It exploits the fact that most numismatic objects are multiples and that many of the observations to be made about one example of a given type of coin or medal will usually apply to all specimens of that type.

Three applications of master-records are considered here. Each is intended to make full use of the computer's ability to process data more rapidly and with greater flexibility than manual systems. The first is as an aid to «data capture», with a view both to improving speed of compilation and to ensuring consistency of expression. The second is as a solution to the problem of how to store coin-legends in a form which enables their disposition and completeness to be recorded (where required), but at the same time permits the substantive text to be indexed alphabetically or to be searched for particular expressions, regardless of punctuation or editorial commentary. The third, run in conjunction with a so-called «shadow-file», is to provide an efficient means of recording «second-level» information, such as the detailed elaboration and classification of coin-types.

²⁹ For reasons of space, a summary only of the original communication is given here. The full text will appear elsewhere, as will a detailed listing of the Campiglia Marittima (1934) hoard derived from the database procedures outlined in this paper.

The various procedures outlined here were developed with examples taken almost entirely from the issues of the Roman Republic, although their application is not exclusive to that series³⁰. The coin data are derived primarily from the collections of the Museo Civico «G. Fattori», Livorno (Italy). In particular, use is made of a hoard of sixty-eight Roman republican denarii found at «Pratino», comune of Campiglia Marittima, in 1934³¹. For present purposes, the generally excellent condition of the Campiglia coins, due probably to their narrow spread (a maximum of eighty-seven years on *RRC*'s dating, with fifty-six examples having circulation lives of fewer than fifty years), compensates in large measure for their paucity. They provided an excellent opportunity to experiment with problems of legend retrieval and of type analysis. The operations themselves followed the NUMiSmatica structure (see Study A, above) and were run under a standard xBase relational package (viz. *dBASE III PLUS/IV 1.1*TM).

2. Collective entries and Data capture

When it comes to documenting museum collections, or even excavation-materials, what distinguishes numismatic objects from many other classes of artefact is that coins and their like are usually «multiples». At its simplest, a master- or «ideal» record is a collective entry containing those statements which correspond to all examples of an issue or series which are substantially the same, whether from the same dies or not. In the case of NUMiSmatica, the master-record is a standard entry indistinguishable in format from the individual object-records which it governs. Depending upon the purpose of the file, this may be long (BASIC), intermediate (BASICY), or short (BASICX). Every record on the database contains a Reference-key (see Study A at § 6). This provides each object with a unique number. A master-record will have the same number as the single examples which correspond to it, except for the three positions of the Object Reference sub-field after the decimal point. In the case of the collective entry, these are completed with «.000». The single specimens are then entered progressively as «.001», «.002», «.003», and so on up to a maximum of «.999». Data common to all members of the set are simply copied from the collective-entry to the individual records, using one of the commands offered by the host-package.

Judged solely as an aid to compiling catalogues, the immediate usefulness of the master-record procedure depends on the extent to which the material to be catalogued contains two or more specimens of the same type. No speed advantage is claimed in respect of a body of singletons, although even in those cases the beneficial way in which legends and second-level data are handled might be thought to justify both the extra effort and the additional memory which the procedure requires. The real benefit comes when the material demonstrates a high level of duplication or repetition, as is often the case with hoards. Copying each master-record for as many examples of a given type as the find contains is the electronic equivalent of writing «ditto», «similar» or «the same type», but with the advantage that each record can be treated as a self-standing document.

But looking at the requirements of just one collection is to undervalue the usefulness of the computer. The collective entries prepared for one block of material (collection or hoard) can be copied to a second file, where they can stand as the source for individual object-records of coins from another collection or hoard, just as easily as they can be copied to provide individual records for the «home» file. In this sense, the master-record takes on the aspect of a stock-entry, or the computerised equivalent of a standard catalogue-manual. A realistic assessment must be that this will not be appropriate in every case. The opportunity to develop a set of master-records into a standard catalogue of a given series will depend upon the volume of material to which the

³⁰ Text references are to M. H. CRAWFORD, *Roman Republican Coinage*, 1-2, Cambridge, 1974 [1975] (*RRC*).

³¹ For a preliminary account of the find, see E. RIESCH, *Rassegna degli scavi e delle scoperte nel suolo d'Etruria da 1 Luglio 1933 al 30 Giugno 1934*, in *Studi Etruschi*, 8, 1934, p. 335-337, at p. 336 (I owe this reference to Prof. M. H. Crawford).

cataloguer has access, whether in terms of a single collection or cumulatively, and upon the quality, and therefore reliability, of that material.

For many purposes, however, it is unnecessary for the outcome of a query to take the form of a listing of every recorded example of the type or types which the computer matches to the various search criteria. Indeed, in the case of a large data-bank, an ability to limit the scope of a query to collective entries can result in a significant saving of time. The distinction between collective and individual records is reinforced by restricting the use of the Total field to the compilation of master-records and entering the number of specimens corresponding to the individual object-record (normally one) in the Sub-total field. Adding the Total field to a command-line which has among its «conditions» that the Collection Number field includes the expression «0 (coin-type)», a conventional statement to indicate a master-record, results in a summary of the material specified by the other search criteria.

3. Legends

When run in conjunction with a «shadow-file», master-records combine flexible representation of coin-legends with efficient text retrieval. Each side's text or inscription can be transcribed using a range of symbols and other conventions to indicate layout, breaks, punctuation, lacunae, etc. The system stores the result in a way that allows legends to be sorted on the basis of their text content alone.

On the master-record the legends are transcribed in their complete or ideal forms, subject to certain conventions. For example, all texts are currently normalised using standard Roman script, with regularly-formed Latin letters being rendered in upper-case and transliterated Greek letters and irregular or aberrant Latin letters, including ligatures, in lower-case. Blanks are used to separate the legend into its constituent words or parts of words, irrespective of whether the text is so divided on the coin. Observed breaks in a continuous inscription are shown by either «=» (break within a single line or curve of text) or «||» (division into two or more parallel lines of text). The disposition of the different elements of the legend about the two faces of the coin is indicated by a system of «tags»: «|» for the outer inscription, «/» for the exergual one, and «\» for any letters in the field proper. In the first and last cases, these may be qualified by secondary tags indicating a precise location; for example "«+07»" for an outside inscription «beginning low left, inwardly»; and "«s»" for «in left field». This ability to tag a legend can be useful in focussing attention on minor details which might otherwise escape the cataloguer. It also provides a means of sorting a series, such as the aes issues of the Roman Republic, for which the disposition of the legend (ethnic and denominational mark) and of any issue-mark are among the principal aids to identification.

A search for a particular legend or expression is normally restricted to a check of these collective entries. And it is, of course, the full version of the legend which is copied from the master-record to the individual object-records. Where a legend contains variable elements (for example an officina-mark or a year), the individual entry can then be emended accordingly. If desired, the individual record can also be edited to show the inscription as it is preserved on that specimen, using conventions similar to those familiar from epigraphy. Because the complete text is available through the collective entry, missing characters are not normally restored. Thus, single square brackets «[]» are here employed to contain incomplete or poorly-read characters, rather than restorations.

4. Shadow-file and Second-level data

Unfortunately, precision of transcription and the use of tags is normally bought at a high price. The problem is that *dBASE* and similar *xBase* packages effect sorts (whether under «List/Seek» or under «Index» commands) by evaluating not just the letters of the alphabet, but all the «characters» (including blanks) entered in a particular field. Thus when an index is made of a legend field in which these and other editorial marks are

interspersed among the letters of the substantive text, the values of the non-alphabetic elements help to determine the final index-order.

The solution offered here is that of the so-called «shadow-file». This was originally devised as a means of emulating the «version» facility of the main-frame program, and in particular of recording under-types and other «alternative» answers (see *Study I* at § 3. 2 and § 6. 7). It is an independent file, either identical in structure to the file which it is intended to shadow or comprising a selection of that file's fields. Here, its content comprises copies of the master-records prepared on a standard BASIC file and copied to the corresponding shadow-file (BASICZ) by means of an «Append» command. Once in the shadow-file, the text of the legend fields can be edited to remove all tags and other editorial intrusions. The result is a text which can be indexed and searched with both ease and accuracy (Fig. 11).

| | | | |
|--------|---|---------|--|
| 390.2 | anepigrafe 'L LVCRETI TRIO' (latn) | 433.2 | 'BRVTVS' (latn) 'AHALA' (latn) |
| 494.39 | anepigrafe 'L MVSSIDIVS LONGVS' (latn) | 366.2a | 'C ANNI T F T N PRO COS', 'EX S C' (latn) 'L FABI L F HISP Q' (latn) |
| 494.30 | anepigrafe 'L REGVLVS' (latn) | 366.4 | 'C ANNIVS T F T N PRO COS', 'EX S C' (latn) 'C TARQVITI P F Q' (latn) |
| 317.3a | anepigrafe 'L SATVRN' (latn) | 357.1b | 'C NORBANVS' (latn) anepigrafe |
| 405.3b | anepigrafe 'M PLAETORI CEST', 'EX S C' (latn) | 480.05b | 'CAESAR IMP' (latn) 'P SEPVLLIVS MACER' (latn) |
| 494.23 | anepigrafe 'P CLODIVS M F' (latn) | 480.17 | 'CAESAR IMPER' (latn) 'M METTIVS' (latn) |
| 341.1 | anepigrafe 'Q TITI' (latn) | 494.42c | 'CONCORDIA' (latn) 'L MVSSIDIVS LONGVS', 'CLOACIN' (latn) |
| 464.4 | anepigrafe 'T CARISIVS' (latn) | 467.1a | 'COS TERT DICT ITER' (latn) 'AVGVR PONT MAX', 'D' (latn) |
| 464.1 | anepigrafe 'T CARISIVS III VIR' (latn) | 423.1 | 'FLORal PRImvS' (latn) 'C SERveLL C F' (latn) |
| 425.1 | 'ANCVS' (latn) 'PHILIPPVS', ACQVA MARC' (!) (latn) | 393.1a | 'G P R' (latn) 'CN LEN Q', 'EX S C' (latn) |
| 414.1 | 'BROCCHI III VIR' (latn) 'L FVRI CN F' (latn) | | |

Fig. 11. Comparative index of obverse/reverse legends : shadow-file entries (Campiglia (1934) hoard) (listed by "RIC no.", "obverse legend", reverse legend").

Unlike individual object-records, which are merely sub-sets of collective entries, shadow-file records have the further advantage that they can be used relationally to govern the main file's output. Thus, using the Standard Literature reference number (here *RRC*), a match can be established between the shadow and main files, whereby a search of the latter can be made conditional upon the «pure» form in which the legend appears in the latter.

Such stripped-out legends are an example of so-called «second-level data», that is information which does not require repetition in respect of individual examples. So, too, the elaboration and classification of coin-types fall into this category.

The effective length of NUMiSmatica's fields for summary type-descriptions is one hundred characters, the maximum number which either version of the *dBASE* package used here is able to index. Although the compiler might occasionally wish that he or she had slightly more space to describe a particular type, this limit serves as a valuable discipline. It encourages the use of forms of expression better suited to index-based searches than might be the case were a literary style adopted. In particular, it means that there is little scope to obscure the substantive elements of the type with a plethora of minor details. That is not to say that other forms of query are not legitimate. At one end of the spectrum, the student may be seeking a detailed description of a particular feature (for example the decoration on the side panels of a chariot); at the other end, he or she may wish to undertake searches requiring an overview of the material (for example «female divinity» rather than a particular manifestation such as «Venus» or «Roma»).

Minor distinctions not relevant to a wider identification of the issue can conveniently be expressed by means of a collective entry in the shadow-file. Note that the shadow text remains that of the main-file, unless modified at this stage; and although the constraint of a maximum of one hundred characters remains, space can be gained by deleting any part of the text copied from the main file and available there for consultation. The same solution is offered to the problem of type-classification. It is clearly unnecessary to burden every reference to «Roma» with the qualification that she is «female» and a «divinity». But these are terms which can be easily accommodated in the collective entries stored on the shadow-file. The «classification» need not consist of anything more than a string of key-words. Once again, it is possible to sort the type-descriptions entered in the main file against the classification of those types held in the corresponding shadow records. So, for example, the main Campiglia file employing standard index-like descriptions was searched first for female and then for male divinities, using a simple classification containing those terms which had been added to the string in the shadow-file (Fig. 12).

| | |
|--|--------|
| Cerere <Ceres> : testa (d) + corona-spighe (!), pendente | 467.1a |
| Cerere : busto (d) + vest. : testa (d) + corona-spighe, pendente \ «s» spi | 414.1 |
| dea (!) : busto (d) + vest. : testa (d) + diadema, pendente, collana \ «b» | 366.2a |
| dea (!) : testa (d) + diadema, pendente, collana \ «db» bilancia (simb) | 366.4 |
| Flora : testa (d) + copricapo (+ fiori), pendente, collana-ciondoli \ «s» | 423.1 |
| Giunone <Iuno> Sospita : testa (d) + pelle-capra | 316.1 |
| Giunone <Iuno> busto (d) + vestito : testa (d) + frangia-perle (?), pendente | 464.2 |
| Proserpina : busto (d) + vestito : testa (d) + nastri (!), pendente, coll | 405.3b |
| Roma : busto (s) + [s] scudo (!), [d] lancia : testa (s) + elmo, collana\ | 292.1 |
| Roma : testa (d) + elmo (lembo + stella), pendente, collana | 263.1a |
| Roma : testa (d) + elmo, pendente | 302.1 |
| Roma : testa (d) + elmo, pendente, collana | 273.1 |
| Roma : testa (d) + elmo, pendente, collana | 301.1 |
| Roma : testa (d) + elmo, pendente, collana-ciondoli | 367.5 |
| Roma : testa (d) + elmo, pendente, collana\ «s» corona (!) (simb) | 260.1 |
| Roma : testa (d) + elmo, pendente, collana\ «s» spigaa (!) (simb) | 323.1 |
| Roma : testa (d) + elmo, pendente\ «s» l-latn (ctrl) | 337.3 |
| Roma : testa (s) + elmo, pendente, collana | 317.3a |
| Venere <Venus> : busto (d) + vestito : testa (d) + corona-alloro, diadem | 430.1 |
| Venere <Venus> : busto (d) + vestito : testa (d) + diadema, vela, penden | 360.1b |
| Venere <Venus> : testa (d) + diadema, pendente, collana | 458.1 |
| Venere <Venus> : testa (d) + diadema, pendente, collana-ciondoli\ «s» C | 468.1 |
| Venere <Venus> : testa (d) + diadema, pendente, collana\ «s» n-latn (ct | 357.1b |
| Vittoria <Victoria> : busto (d) + ali : testa (d) + nastro, pendente, co | 464.4 |
| | |
| Apollo : busto (dietro) + vestito, + [d] fulmine; testa (s) + cerchio/d | 354.1 |
| Apollo : testa (d) + corona-alloro, orecchino-rosetta\ «s» lira (simb) | 494.23 |
| Apollo : testa (d) + corona-alloro\ «db» l-latn (ctrl) | 340.1 |
| Apollo : testa (d) + corona-alloro\ «db» divrs (ctrl) | 342.5b |
| dio (!) : busto (d) + vestito + [sp] tridente : testa (d) + corona-allor | 352.1c |
| Dioscuri (2) : teste (d) sovrapposte + pilei (+ corona-alloro/cechi)\ | 463.1b |
| Giove <Iuppiter>/Veiove <Veiovis> : Imago (?) (!) : testa (d) + corona-all | 459.1 |
| Liber : testa (d) + corona-esedra | 494.36 |
| Mercurio : busto (d) + vestito, + [sp] caduceus : testa (d) + petausus (+ | 362.1 |
| Nettuno <Neptunus> : «busto» (d) + [sp] tridente : testa (d) + corona-al | 390.2 |
| Pan : maschera (d) nuda, + barba | 449.1a |

Fig. 12. Index of obverse types of Roman Republican denarii with female/male divinities : master-records set in relation to matching shadow-file records (Campiglia (1934) hoard) (listed by «obverse type» (abbreviated), «RRC no.»).

5. Conclusion

The purpose of the exercise summarised here was neither to lay down rules nor to argue that the present procedures offer the only (or necessarily the best) solutions to particular problems. Rather, it has aimed to demonstrate some of the ways in which off-the-shelf software can be easily adapted by numismatists to the challenge of their material.

III. *The curator strikes back; or computerisation in practice* (T.R. VOLK)

1. Introduction

The evening session on 9 September was devoted to a panel-discussion on Computerisation chaired by Dr. M.L. Bates (American Numismatic Society), the outgoing Chair of the Sub-committee for the Computerisation of Numismatic Data. The panel comprised (in addition to Dr. Bates) M. P. Jones (British Museum), Dr. H. W. Jacobi (Koninklijk Penningkabinet, Leiden), and Dr. H. Nilsson (Kungliga Myntkabinettet, Stockholm). Each speaker was invited to give his off-the-cuff thoughts on the theme *The curator strikes back; or computerisation in practice*, as perceived in each of the cabinets represented on the panel. At the end of the session the present writer, as out-going Secretary of the Sub-committee, was asked to summarise panel-members' presentations and the ensuing floor-discussion. His remarks dealt mainly with the contrasting experience of managing a small collection (viz. the Civica Raccolta Livornese di Monete e Medaglie). The following text rehearses the principal points of that summary.

2. Panel-discussion

Mark Jones has injected a healthy measure of scepticism to our discussion. The other contributors to the panel will, I hope, understand if I concentrate my own remarks on his broad criticism of computerisation projects, namely a failure on the part of institutions usually to undertake any analysis of the cost-effectiveness of what is proposed. This failure, he rightly underlines, is the more remarkable, when one considers that the decision to computerise often represents a considerable commitment of man-power units not merely at a given point, but extending over decades. The example he used was of his own Department of Coins and Medals in the British Museum, for which the present programme of computerisation is likely to absorb resources in excess (at to-day's prices) of one million pounds sterling – a calculation which prompted the reflection that if that sum were available under heads other than that of computerisation, what improvements might not be made to the range and quality of the Department's numismatic holdings? It is not my purpose to comment on the detail of Mr Jones' case; that would require considerably more information on the British Museum's programme of work than is available to me. And it would in any case miss the general point to which his remarks properly direct our attention: why computerise (unless to conform with fashion and political expediency, the two factors which Mark Jones reluctantly identifies as decisive in the case of his own Department)?

As Secretary of the Sub-committee for the Computerisation of Numismatic Data, I might be expected to speak in favour of the computer. Indeed, on balance I do think that computerisation is a «good thing». But that is not to say that I do not have a lot of sympathy with Mark Jones' evident frustration. In less trenchant terms, and perhaps therefore less effectively, I tried in my key-note address at the Numismatisches EDV-Kolloquium organised by Dr. Wolfgang Hess at the Staatliche Münzsammlung München in November 1989 to stress the importance of each institution's (or scholar's) choosing an «appropriate» solution for its (or his/her) needs³².

The scope of this evening's discussion is not computerisation *per se*, but specifically the application of information technology to collection management. The benefits that may accrue from the use of a computer to further projects such as *Fundmünzen* (represented here in the poster-session by Dr. David Wigg), Dr. von Vacano's ISEGRIM database for the iconography of the coinage of ancient Asia Minor,

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For reasons beyond the immediate control of our Munich colleagues, the detailed proceedings of the colloquium have not been published. The thrust of my remarks was that there are no all-embracing answers to the question of computerising collections, but that each project requires its own definition; given the speed of technological development, goals should normally be achievable within a span of approximately five years; and due allowance should be made not only for capital expenditure, but also for the cost of staff-time.

and the various enterprises centred on the Institut für Numismatik der Universität Wien are not at issue³³. Even less in question is the usefulness of the computer in «number-crunching», if Drs. Carcassonne and Depeyrot will excuse the use of that term to describe the statistical program that they have generously made available to members of the Congrès³⁴.

Speakers were instead asked to address the pros and cons of computerisation from the point of view of museum curators with responsibility for managing considerable holdings of numismatic material. Drs. Jacobi, Nilsson, and Bates each represent a cabinet committed to the introduction of electronically-stored records, whether as a complement to or as a replacement for manual inventories; none more so than the last named, who as well as chairing this session, has spoken on behalf of the American Numismatic Society, which can now count on over four hundred thousand computerised records relating to its collections. None of these speakers has hidden either from this evening's audience or in private conversation that computerisation has not been plain-sailing all the way. Dr. Nilsson has experienced his institution's transfer from a DOS-based system running on PCs to the complexity of a UNIX-based network and has rehearsed, too, the problems arising from his country's statutory requirement of freedom of access to electronically-stored data held by government institutions. The question of the validation of data was at the centre of Dr. Jacobi's remarks: how to ensure that data are entered accurately. Without that qualification, discussion of the relative speed or ease of recovery of the information contained on the database is meaningless in face of the principle «junk in, junk out». The sheer size of the New York operation, with responsibility for the different sections of the database allocated to the responsible curatorial officer, has resulted in inconsistencies (better, particularities) of usage that make the recovery on a simple command of, say, all the Society's holdings of Sicilian coins difficult, if not impossible. The difficulty in that case arises from the absence of an agreed terminology for the name of the island, so that each curator is free to adopt the term with which he or she feels most comfortable, for example «Sicily», «Sicilia», «Sicilie» or «Sicilliyyah».

We have also heard of some of the benefits that computerisation has brought. Most graphic perhaps was Dr. Bates' account of the rôle played by the computer in 1989 in identifying gaps in the Society's collections that were the result of thefts by one of its regular visitors³⁵. In an altogether happier application of the computer, I should recall, too, Dr. Jacobi's description (at an earlier session of the Congrès) of the inter-active programs he has developed using *Hypercard*TM to explain Dutch coinage and paper-money to visitors to the Leiden cabinet's exhibition area.

From the floor have come spirited pleas that numismatists should agree terms to be employed in creating database records, and so avoid so far as possible the kind of problem to which Michael Bates has drawn attention as occurring even within the same system. Co-ordination at some level would certainly seem to be a prerequisite for the free exchange of data among institutions³⁶. We have also heard calls for the publication in

33 For one of the outcomes of the ISEGRIM project, see O. VON VACANO, *Typenkatalog der antiken Münzen Kleinasiens*, ed. by D. KIENAST, Berlin, 1986. Among the research projects of the Abteilung für Antike Numismatik in the Vienna Institut are an analytical listing of Greek coin-types (R. DENK), data-banks for sections of the Roman imperial coinage, and a register of references to wages and prices in ancient literature (W. SZAIVERT) *Institut für Numismatik (Universität Wien)*, *Mitteilungsblatt*, 3, 1991, p. 21. Note, too, the Institute's planned computerised index of its vast photo-file: *Mitteilungsblatt*, 3, 1991, p. 27 (R. DENK).

34 NUMISTAT, a set of statistical programs compiled by C. CARCASSONNE, G. DEPEYROT, and J. MORA MAS to facilitate a range of operations of interest to numismatists.

35 See, too, the published remarks of the Society's Chief Curator, Dr W.E. METCALF: «The theft and the recovery procedure highlighted the great utility of the Society's computerized database as an inventory tool» (*Annual Report of the American Numismatic Society ... 1989*, p. 7-8).

36 The principle is more easily stated than realised. The same plea was made during the opening session of *La Numismatica e il Computer* (n. 1, above), p. 24-28: *The computer and numismatics: some questions*; and is repeated below, at § 4.

electronic form of the Krause-Mishler *Standard Catalog of World Coins* and of future editions of *Roman Imperial Coinage*³⁷. Publication of either title in a format that permitted individual entries to be imported into a local database would for most curators probably transfer over-night the weight of advantage in favour of computerisation. Perhaps my successor as Secretary of the Sub-committee for the computerisation of Numismatic Data will be able to report agreement on both questions at the next International Numismatic Congress?

By contrast, my own contribution to this discussion is at a much more mundane level. Although I have had some opportunity of working at the «top-end» of the market (notably in Spain), it is on my experience of computerisation in connection with my work as an external collaborator of the Museo Civico in Livorno (Italy) that I wish to base my remarks. The Civica Raccolta Livornese di Monete e Medaglie is certainly not one to be ranked among the great collections of which we have heard report this evening. It is not even one of the second-level civic cabinets in which Italy is so rich. It is, however, typical of several hundred collections scattered over Europe, the product either of local archaeological activity or of the gift of one or two enthusiastic collectors (in the present case, both factors apply). As such, the needs identified in Livorno and the solutions adopted to satisfy them may serve as an encouragement to smaller collections elsewhere to embark on a programme of computerisation. For the numismatic world in general, the benefit of such a development could be to unlock a store of treasures which most scholars are now forced to ignore³⁸.

3. *Managing a small collection : the Civica Raccolta Livornese*³⁹

3. 1. *Introduction*

The following remarks are an attempt to consider the question of computerisation from the point of view of a non-specialist curator faced with managing a numismatic cabinet as just one among a number of sections of the museum for which he or she is responsible. Not only may the curator lack expert knowledge of numismatics and of its conventions, but he or she is unlikely to have ready access to more than a handful of standard numismatic texts. These two constraints serve to define most sharply the different priorities of the small collection from those of national cabinets and of museums with specialist departments. And yet the «local» collection may still cover almost as broad a range of series, albeit in much smaller number, than its grander counterparts and may well contain, singly or collectively, material of considerable scholarly interest.

The discussion is illustrated by reference to recent developments in Livorno⁴⁰. The decision to computerise the Museo Civico's numismatic inventory necessarily reflects a number of circumstances which are rooted in the history of the cabinet or are otherwise

³⁷ A computerised check-list of the coins of the Mughal Empire and of the Indian States was circulated by Krause Publications (Iola, Wisconsin) in 1985.

³⁸ Compare the series of part-catalogues of French provincial collections (often prepared by the specialist staff of the Bibliothèque Nationale's Département des Monnaies, Médailles et Antiques), which are usually produced for the museum of whichever town is the current host of the Société française de numismatique's regular Journées numismatiques; and the more ambitious catalogues of Austrian monastic collections included in the series *Thesaurus nummorum romanorum et byzantinorum*, published by the Numismatische Kommission of the österreichische Akademie der Wissenschaften.

³⁹ For a full account of the rationale and application of the Livorno project, see T.R. VOLK, *Gestione informatizzata di una collezione locale di numismatica : il caso della Civica Raccolta di Livorno*, in *Quaderni della Labronica* (in press).

⁴⁰ The restoration of the Civica Raccolta Livornese began in 1973 as the result of an initiative of Vera Durbè, newly-appointed Curator of the Museo Civico «G. Fattori», and of the then Assessore alla Cultura, Vittorio Marchi. Prof. G. Gorini (Padua) was invited to undertake a re-ordering of the collection, still in the chest in which it had been evacuated in 1940; in this work, he was joined at the end of 1973 by the present writer, who on annual leave from a post in England was subsequently responsible for completing the first stage of the proposed programme.

narrowly local. Two such elements are the housing of the collection and inadequacies of the inherited documentation. The museum's original accommodation was destroyed by war-time action in 1943 which also involved the loss of the *medagliere's* display-cases and coin-cabinets⁴¹. As a consequence, pending the construction of a new Museo della Città di Livorno, the collection is accommodated in extremely cramped (albeit secure) conditions in the reserves of the Civica Pinacoteca. The manuscript register which comprises the main historical documentation of the collection, while not without value, has major limitations as a tool for collections management, chief of which are that it is incomplete and that it is only partially «systematic»⁴². Nor should a certain opportunistic element be discounted. Nonetheless, some of the vicissitudes that have affected the Raccolta Livornese may be familiar to curators elsewhere, and so be relevant to their own deliberations.

The overriding concern of the Museo Civico is for the security of the collections. In the case of the coin cabinet, this reflects not merely the obvious vulnerability of small objects, but sadly, too, past depredations, including major thefts in 1903 and 1921. An accurate inventory of the material is seen as the indispensable accompaniment of steps to ensure that the collection is housed with due regard to its conservation and physical protection. There is, too, a statutory obligation on the Comune to maintain a list of its property for audit purposes. But in addition to these formal needs, there exists a «political» imperative that a previously hidden resource, such as the numismatic collection, should be made available as widely as possible. This means not merely furnishing details of the museum's coins and medals to interested scholars, whether by publication or in answers to individual enquiries, but also presenting sections of the collection to a wider public, by means of displays and demonstrations. Here, a powerful consideration is a revived interest in the long-planned conversion of the eighteenth century Bottini dell'Olio into a museum of the history of Livorno. Consider, too, a hope that by being seen to manage the present collections effectively, the Museo Civico will be able to attract new benefactions to match those inherited from earlier days.

These ambitious objectives have, however, to be set against a realistic assessment of the development of the Comune's museum-service, and in particular of future staffing-levels and the provision of library and other support-services. Since there is no prospect of an established appointment in either archaeology or numismatics, documentation prepared on the museum's behalf must be accessible to managers unfamiliar with numismatics. Further, in its essentials, that documentation must be self-standing; it will not be sufficient to cite a standard reference as identification of a particular piece, if the book or article referred to is unobtainable in Livorno. Both considerations have determined the scope of the data to be included in the museum's numismatic database.

In the case of Livorno, computerisation is viewed as a partial solution to the dilemma of matching aims to resources, by offering a way of channelling outside support to meet «expert» problems, while at the same time «empowering» local staff to manage the collections on a day-to-day basis.

3. 2. *The collections*⁴³

The numismatic collection comprises just over 9,800 items, including paper-money, art-medals, and decorations. Although this number pales in comparison with the

41 For the pre-war disposition of the collection, see L. PES CETTI, *Il riordinamento del Museo Civico*, in *Liburni Civitas*, 11(i), 1936, p. 33-45; the photographic illustration of the «Sala del Medagliere» is reproduced in *La Donazione Chiellini* (n. 43, below), p. 6.

42 *Museo Civico di Archeologia e Numismatica. Catalogo delle monete e medaglie*, unpublished manuscript, [1901-1932(?)] P. MANTOVANI, nos. 1-3533; A. FRANCO, nos. 3534-6861.

43 For a general account of the collection, with particular reference to supposed local finds from «Turrita», see T.R. VOLK, *La Donazione Chiellini 1883-1983 : i ritrovamenti monetali da Santo Stefano ai Lupi*, Livorno, 1983, p. 13-24.

size of the holdings of such other civic cabinets as Bologna, Genoa, and Padua, the collection represents the most numerous section of the Museo Civico, being approximately twice the total of the other objects which constitute the cultural heritage of the Comune di Livorno. Whether by chance or by discrimination, the holdings are, however, extensive enough to include individual pieces of interest and importance (for example, a *nummus* of Martinian from what otherwise appears to be an unrecorded hoard from Orciano Pisano⁴⁴; a denaro of Ugo, marchese di Tuscia⁴⁵; and an example of the so-called «stellino» testone of Cosimo I de' Medici, duke of Florence⁴⁶). Moreover, at least two series (ancient Rome and the coinage of Italy) are sufficiently comprehensive to provide a representative account of the coinage of their respective periods. As such, both certainly have value as educational tools.

3. 3. Towards a computerised inventory

The purchase of industry-standard hardware and the *MS-DOS*TM operating system in the Summer of 1991 as part of a wider programme to develop the information and management resources of the Comune's library- and museum-service meant that the Museo Civico could adopt without difficulty the structure and procedures developed for NUMiSmatica, although in practice data were entered on the writer's machine⁴⁷. Two blocks of material were chosen for experiment: the small group of British coins (insular and colonial) and the locally interesting series of coins of the Granducato di Toscana. Note, however, that the ancient coins and medieval Italian coins with which it might have been expected that the project should begin were given a low priority. This was because their high «interest» had ensured that the Museo Civico's immediate security objective had already been met by a photographic campaign begun in 1973.

The choice of the British series as a test of what was necessary was determined largely by the writer's having with him a number of standard texts. Moreover, the 215 British coins and tokens constitute the single largest group among the non-Italian early modern and contemporary series and it is certainly the most varied, comprising examples for territories in the Mediterranean, North America, the Caribbean, Africa, India, and the Far East, in addition to those from the British Isles proper. Whether or not the presence of these and other overseas coins is to be directly explained as a function of Livorno's important port, they usefully illustrate the city's documented commercial connections⁴⁸. Although most of the examples are without numismatic significance, even here the collection threw up the unexpected, including an apparently unrecorded year variant of an East India Company issue⁴⁹.

44 *RIC* 7, p. 608, n. 46 (Nicomedia, officina B; 3.09 g); register no. 945 (acquired before July 1903). (Reference to *RIC*, 7, comp. by P. M. BRUUN, London, 1966).

45 *CNI* 11 (n. 51, below), p. 62, nos. 1-5 (the variety is indeterminate: 1.17 g); register no. 6512 (registered, and possibly acquired, after 1912).

46 Galeotti (n. 51, below), p. 69, type 16 (9.75 g); register no. 2132 (Reuther bequest, 1901).

47 Several circumstances conjoined in the Summer of 1991 to enable a trial to be made of computerising sections of the coin-inventory. But a final decision is owed to the sympathetic interest of the present Assessore, Mario Bertini, whose first-hand experience of computer-systems ensured that his own expectations were firmly realistic, and of Daniela Nenci, into whose day-to-day care the several collections which make up the Museo Civico have been entrusted since 1990. Note that the choice of equipment and operating system was determined by a requirement that it should be compatible with the system already installed in the Biblioteca Labronica, with which the Civica Pinacoteca currently shares premises, at the initiative of the head of the Comune's library- and museum-service, Dr. Duccio Filippi.

48 The bulk of the British coins are probably from the Reuther bequest (1901). The only piece with a supposed archaeological «provenance» is an extremely worn halfpenny token by Peter Kempson for a tradesman in Gosport (Hampshire), found among the residuum of material attributed to the S. Stefano («Turrìta») site; for that material in general, see T.R. VOLK (n. 43, above), p. 99-121.

49 Copper double piece of the Bombay Presidency, 1728-1749 issue, with year-date «1738» or «1739»: compare F. PRIDMORE, *East India Company, Presidency Series c. 1642-1835 (The*

The total of the Museo Civico's coins of the Granducato exceeds 800 items⁵⁰. In response to an enquiry from the Director of the Archivio di Stato, Livorno, an inventory was made first of the issues of the de Medici period (1531-1737). These comprise 284 specimens in gold, silver and billon, with the trade coinage of the Granducato, marked with the name and types of Livorno (though struck at the Florence mint), being particularly strongly represented.

Standard NUMiSmatica-type formats were employed for the two databases. In each case, the base requirement was an inventory-style entry capable of handling the enquiry «Do you have coins/medals of ?». It was also a requirement that individual records should include any cross-reference to the museum's register and a note of any negative number. This provision does not, however, preclude the eventual creation of a uniform file for administrative data covering all classes of object on the museum's inventory and linked relationally to the dedicated numismatic files by means of a common field or fields.

While the compiler might reasonably assume end-users to bring to the database some knowledge of domestic history (states, dynasties, rulers, etc.), foreign material may well require more detailed explanation. Thus, for the British coins, the full BASIC format was adopted. This was in order to compile the extra detail regarding Issuing Authority [AUTORITA' EMITTENTE], Mint [ZECCA], and Issue [EMISSIONE], which it was felt users unfamiliar with the material might find helpful. Since it was not considered necessary at this stage to include a full type-description (except in the case of observed variations from the standard reference), a new mask (BASIC3) was prepared in which data entered under type or legend remained hidden. The coins of the Granducato were entered on a standard short-format BASICX file.

In both databases, simple searches are based on the Conventional Identification field [IDENTIFICAZIONE Conven.le]. Data were entered as a string of key-words (in a controlled order), using the terms which were thought most likely to be in common use. In the case of the British series database, this meant not only using Italian nomenclature for rulers and places (for example «Vittoria» for Victoria and «Londra» for London), but also following general Italian usage in allowing the expressions "<Inghilterra>" and "<inglese>" as alternative terms for «Gran Bretagna: Regno Unito» (Great Britain: United Kingdom) and «britannico» (British). The English versions of proper names, together with their Italian equivalents, were entered in the extra paragraphs, so that records could be easily related to the standard literature or searched for terms included in any enquiries from English-speaking correspondents.

The case of the coins of the Florence mint was altogether simpler. Here, the regularity of the coinage and the relatively high level of repetition among individual specimens, with many coins being distinguished from one another by no more than the year-date, meant that compilation was substantially aided by applying the «master-record» procedure. Using an admittedly short-format entry, a basic record for each coin was completed at an average rate of between thirty-five and forty coins per hour, although such variables as weight and diameter were added later. Note, however, that before listing was begun, the coins were checked to ensure that each piece was already

Coins of the British Commonwealth of Nations, 4, India, 1), p. 160, types of nos. 99-103; C(ollezione?)R(euther?) 601, 18.07 g.

50 In addition to the original collections of the Museo Civico and the bequest of Ernesto Reuther (1901), they include a substantial series of base metal coins of the Habsburg-Lorraine dynasty acquired from the Luigi Agenore Celati collection (1917); for the purchase by the Vatican of papal coins from this collection, see C. SERAFINI, *Della collezione Celati di monete pontificie acquistata per il medagliere vaticano dal pontefice Benedetto XV*, in *Atti della Pontificia Accademia Romana di Archeologia*, serie 3, *Rendiconti*, 1, 1921-22/1922-23, p. 129-43.

identified by the appropriate type-number from Galeotti's standard reference to the coinage of the Granducato⁵¹.

The data entered on the two databases have proved sufficient to meet a range of standard collection-management tasks. For each series a «short-title» inventory was produced which was capable of expansion into a full catalogue and capable of being updated to take account of any future acquisitions. For audit purposes, there is a bound hard-copy version of completed records. The databases can themselves be sorted and indexed from the keyboard by a series of numismatic criteria (for example metal, date, ruler, state, standard reference, etc.), as well as by negative and register numbers. The master-record procedure allows the material to be condensed and the outcome expressed in terms of the totals of specimens matching the search-criteria; this is in addition to the standard «Count» and «Sum» commands. At the request of the Museo Civico, a procedure which allows denominations to be subjected to relatively complex «value» sorts, in addition to standard searches by coin-name, was established using a shadow Denomination file.

3. 4. Future development

The present procedures represent the first stage in meeting the needs of the Museo Civico. They are limited to a selection of the material in the collections. As it stands, the system is able to deliver an adequate inventory. It is also able to organise data as a preliminary to the publication of a specialist catalogue of those parts of the collection which merit the effort. But to meet the objective of enabling the local staff to use the system with ease, some further smoothing of the «raw» database commands will be necessary. So, too, if the database is to be made accessible to a wider public, either for general consultation or to support selections made for exhibition in the new museum, technical assistance from a computer specialist will be required to render the system more «user-friendly». Both developments will, however, proceed from the firm base of a structure which is able to manage «real» data in a way that matches «real» needs.

4. Conclusions

In attempting to offer some general conclusions on computerisation, I must first distinguish between systems and procedures. My hands-on experience is substantially limited to xBase-standard database packages running under the *DOS* operating system. Within the next few years, it is likely that these will have been largely supplanted by packages running in a *Windows*TM environment (roughly, the industry-standard system which emulates features of Apple-Mackintosh computers); and almost certainly by the time of the next International Numismatic Congress yet further developments will have occurred which will make my present report look itself like a «museum-piece». That is not, however, an argument for inaction or for awaiting the coming of the «perfect» system. Provided a curator keeps within the mainstream of software development, it should always be possible to transfer existing data to a new package. Of far greater importance than the format of the host-software is that the numismatic part of the database should be properly structured.

But if I cannot recommend a particular system, there are perhaps some general pointers which I can derive from my experience in Livorno and elsewhere. The database should be relational in structure and modular in application. I see no long-term benefit in commissioning a proprietary system. With practice and ingenuity, a standard off-the-shelf package such as *dBASE* can meet most, if not all, text-based requirements. Even if

⁵¹ A. GALEOTTI, *Le monete del Granducato di Toscana*, Livorno, 1930. This is to be preferred to the *Corpus Nummorum Italicorum*, 11 (*Toscana: zecche minori*), Rome, 1929 and 12, (*Toscana: Firenze*), Rome, 1930, with which it is more or less contemporary. Unlike *CNI*, which awards a progressive number to each variant (however minor), Galeotti usually distinguishes between substantive issues, to each of which he gives a type number, and their several varieties, which he identifies by means of a secondary number. Reference in the database is made to the type-number.

a dedicated system is judged to offer greater efficiency in data-handling, there is a strong financial argument in favour of a commercial solution. The purchase price of a popular applications package is unlikely to cost more than a few hours of a consultant's time, and thereafter it is the software-house responsible for the package which will bear the cost of improving and developing it. Although popularity is not the only criterion for choosing a product, it makes it more likely that the original developer will seek to market up-grades. It means, too, that the package will be supported by a range of books, from beginners' guides to professional manuals. And, of course, data exchange is considerably easier among a number of institutions/scholars who use the same or similar packages.

Whichever package is finally chosen, I strongly advise the numismatist, or other end-user, to take the lead in designing the database. Most small-system commercial packages are intended for the layman and do not require prior training as a computer-technician. However hit-and-miss the numismatist's first efforts may be, by taking charge of the system he or she will learn how the data need to be structured in order to gain a particular outcome. It is precisely that insight into the material proper that gives the numismatist an advantage over the systems-analyst. The latter, however skilled and well-intentioned, if also unfamiliar with numismatic argumentation, is unlikely to produce a satisfactory structure. The true value of the analyst's contribution may come at the point where sufficient data have been collected to make it worthwhile to refine the numismatist's rough-and-ready model, in order to improve efficiency and to render the system more user-friendly.

Recommended procedures are easier to tabulate.

- a. Learn to take advantage of what the system has to offer and be prepared to modify traditional cataloguing procedures in order to take full advantage of the computer's virtues. In some cases (for example master-records), an existing convention may even be improved by transfer to the computer.
- b. Do not waste too much time trying to devise rules for every cataloguing eventuality; equally, do not base your structure on the needs of one series alone, if your database is intended to have a more general application. As the scope and volume of data entered on the computer increase, so more detailed rules can be derived from practice in managing the data-stock.
- c. So far as possible, ensure that the material of which details are to be entered on the database is itself in good order. That is not to say that the necessity of structuring entries may not itself suggest improvements or corrections which should be made to the material's received order, but dividing it into coherent blocks can certainly lead to significant gains in speed and accuracy. In particular, the temptation to begin a programme of computerisation with «new acquisitions» is probably to be avoided. The chances are that the objects will be too diverse to allow the compiler to take full advantage of the procedures designed to secure efficient data-capture and the result may well be premature discouragement at the whole idea of computerisation. It would be better to retain existing manual procedures and to allow «new» material to be entered, as and when the series to which it belongs is processed. The addition of new material to a series which has already been computerised is, of course, another matter.
- d. Do not try to do everything at once. A modest entry-level (for example the BASICX file-format) will enable the user to familiarise him or herself with the file-structure and is more likely to lead to a relatively rapid input of basic data than a supposed once-and-for-all solution. Note, too, that it is usually easier to add data than to correct inaccurate or corrupt information, which in the meantime will have compromised the database's reliability.
- e. Files should be frequently and rigorously controlled for efficiency and consistency, by creating indexes (and viewing the results) and by running searches with known outcomes. Discovering gaps and inconsistencies in the database is not like spotting errors in a printed text; once the fault is identified, it can be corrected at source.
- f. Follow the advice of every good manual and handbook to make back-up copies of all data-sets.

My report of the Livorno exercise expressly concentrates on the needs of a small collection. The requirements of a large collection are not necessarily substantially different, although the Museo Civico's immediate objective of preparing a basic inventory may well not arise in the case of a specialist department which has maintained a detailed accessions register. In many ways, computerising a large collection is easier than trying to meet the needs of a cabinet such as Livorno. Of course, the scale of operation is different; but it is precisely in the «duplication» of a large collection's holdings that the full benefit of computerisation can be realised.

A more difficult problem, however, is when the needs of the numismatic collection are subordinated to a museum-wide policy on computerisation and uniformity of object-description has a higher priority than trying to match the data-structure to the characteristics of each particular object-type. If standardisation is restricted to ancillary data, such as register number, photographic record, loan-history, etc., this can be handled by relating the numismatic file to a shared file for administrative data. If the substance of the object-description is also to be stored on a central file, my suggestion would be to develop a local system for data-capture and internal handling of numismatic records and to down-load the relevant parts of the same data to the central system, either directly or by means of delimited files.

Mark Jones' principal challenge was that those considering applying a computer to collections-management should first be made to prepare a costing which allowed, in particular, for staff-time. In the case of the Livorno project, that is a question which at the end I shall evade. In the first place, for the technical reason that my time was not a charge on the funds of the Comune di Livorno. And more realistically, because the single most time-consuming part of this Summer's work was not entering data on the computer, but establishing the basic order of the material. There is, too, a case for arguing that the Livorno exercise should be taken as the function of a «learning curve». Much of the experience gained in meeting the needs of the Civica Raccolta is now available to tackle the problems of other collections. Indeed, the listing of the British series benefited from time spent considering the needs of the corresponding material in the University Museum of Archaeology & Anthropology in Cambridge.

But more important than any element of personal history is the underlying argument of the preceding study dealing with «master-records», viz. that data compiled in respect of one museum's coins can serve as the basis for the inventory of another. If I have a general conclusion, it is to urge the case for different collections' concentrating on their individual strengths and offering to exchange those results with institutions whose strengths lie elsewhere. That is not to preclude each collection from adapting to its own needs data taken from another museum, including where necessary translating vernacular terms. Nor would such borrowings be intended to restrict the scope of scholarly discussion and interpretation. But it can hardly be cost-efficient that each collection, large or small, should seek to catalogue its collections in complete isolation – a thought which brings to mind the picture of half-a-dozen curators each applying his or her erudition to the cataloguing of that number of examples of just one type of coin. In the library-world, the sharing of records is long-established and pre-dates the arrival of the computer. I do not, I hope, underestimate the practical difficulty of harmonising formats to a point where data exchanges are quick and reliable, nor that of securing national, let alone international, co-ordination for such exchanges. But as a small gesture, when it becomes available, may I offer to throw into the electronic pool the finished version of the Museo Civico's database of coins of the Granducato di Toscana?

Rinvenimenti monetali da contesti archeologici in Alto Adige

Anna VITTORIO*

Nell'ambito di questo lavoro vengono presentati i rinvenimenti monetali di alcuni scavi archeologici eseguiti negli ultimi anni in Alto Adige (Fig. 1) dalla Soprintendenza Provinciale di Bolzano e dall'Università di Padova, e diretti rispettivamente dal Dott. L. Dal Ri e dal Prof. G. Rosada. Tali rinvenimenti erano stati già pubblicati con l'eccezione di quelli di Laives-Reif, che lo sono parzialmente, e di Stufles 10/B, che sono inediti.



Fig. 1. ○ età repubblicana; □ età imperiale.

1. Laives Reif; 2. Collalbo; 3. Egna; 4. Castelfirmiano; 5. Salorno; 6. Cortina all'Adige; 7. Aica di Fiè; 8. Tires; 9. Bolzano; 10. S. Lorenzo di Sebato; 11. Bressanone-Stufles.

Laives-Reif, via Liechtenstein

Lo scavo di Laives-Reif¹ riguarda un esteso insediamento protostorico del quale, tra il 1980 ed il 1985, sono state messe in luce una serie di unità abitative di tipo retico, a struttura seminterrata ed a semplice pianta rettangolare; ceramiche ed altri reperti ne limitano la frequentazione tra il V e la metà del II secolo a.C. In questo orizzonte nei primi anni si rinvennero due denarii emessi a nome di Q. Fabius Labeo e Ti. Veturius, datati rispettivamente al 124 ed al 137 a.C.². Successivamente sono stati recuperati, in corrispondenza dello stesso edificio, altri 20 denarii, sparsi all'esterno presso l'ingresso, e all'interno dell'ambiente. Rinvenuti in uno strato di limo al di sopra del livello dei pavimenti, relativo al crollo e all'abbandono e formatosi, con tutta probabilità, in seguito allo scioglimento dell'argilla cruda e dell'intonaco dei muri, per datazione e stato di conservazione fanno indubitabilmente parte di un unico tesoretto, che si palesa come un nucleo molto omogeneo. Gli esemplari, databili tra il 155 ed il 115/114 a.C., sono tutti

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¹ B. KRÄLER, *Laives-Reif (Ausgrabungen 1981-1983)*, in *Scavi nella conca di Bolzano e nella Bassa Atesina 1976-1985, catalogo mostra*, Bolzano, 1986, p. 253-259; L. DAL RI-M. FLORES, *Schede descrittive dello scavo di Laives-Reif*, *ibidem*, p. 261-295.

² I due denarii sono pubblicati da G. RIZZI, in L. DAL RI-M. FLORES, *op. cit.* alla nota 1, p. 263, nn. 17.17, 17.18, tav. LXIX.

in buono stato, e presentano soltanto un lieve grado di consunzione. Benché non sia possibile precisare né ipotizzare un'esatta connessione con un momento storico di particolare instabilità e pericolo, che in qualche modo possa giustificare il seppellimento, la data di chiusura costituisce certamente il *terminus ante quem* di frequentazione dell'insediamento, che al momento dell'interramento delle monete appare già abbandonato. Considerando la frequenza di accantonamento ed il breve arco cronologico il tesoretto sembra riferibile ad un piccolo risparmiatore, che ha potuto economizzare una somma modesta se paragonata alla consistenza media dei tesoretti di epoca repubblicana rinvenuti in altre regioni dell'Italia settentrionale³. Nonostante possa trattarsi di materiale in transito, la sua presenza in Alto Adige non si configura come un aspetto numismaticamente isolato e si inserisce perfettamente nel quadro del complesso degli esemplari sporadici, quale ci viene restituito dalla collazione dei dati forniti dai vecchi repertori e dai rinvenimenti meno recenti. A Collalbo-Piperbühel, in una stazione che si estende dall'età del Bronzo all'età del Ferro (La Tène Medio-Tardo), sono stati rinvenuti nel 1933 tre denarii repubblicani, due a nome di L. Furius Philus e databili al 119 a.C., ed uno a nome di M. Fannius C. f., databile al 123 a.C.⁴, monetarii presenti anche nella serie di Laives-Reif. I repertori di Pater Flavian Orgler e del Barb⁵ riportano inoltre 85 denarii rinvenuti in varie località dell'Alto Adige, per i quali viene specificata unicamente la *gens* del magistrato monetario. Questo consente di proporre degli archi cronologici che comprendono tutte le emissioni di monetarii appartenenti a ciascuna *gens* nell'ambito di più generazioni, e che sembrano mostrare un certo addensamento tra la metà del II e la metà del I secolo a.C., gli anni in cui, in seguito al completamento dei principali rami viarii (via Postumia 148 a.C., via Popilia 132 a.C., via Annia 131 a.C.) si sviluppa la romanizzazione di quella Regio X, ove i rinvenimenti di denarii repubblicani sono assai più cospicui⁶. Con la Regio X, della quale farà parzialmente parte, trovandosi suddiviso appunto tra la Regio X-Venetia et Histria, la Raetia ed il Noricum, l'Alto Adige intrattiene rapporti in funzione dei quali il corso e la valle dell'Adige hanno certamente la funzione di via di penetrazione. Infatti i rinvenimenti si concentrano lungo di esso, inoltrandosi poi seguendo direttrici orografiche che la natura del territorio rende percorsi praticamente obbligati, e che oltrepassano lo spartiacque alpino, come testimoniano i ritrovamenti di monete repubblicane anche in Austria e nella Germania meridionale⁷. Il quadro complessivo dei rinvenimenti altoatesini di epoca repubblicana comprende anche 4 esemplari enei ed un aureo. Tra essi il sestante semilibrato di Egna-Mazzon⁸ costituisce la testimonianza più antica, che, seppure sporadica, non si presenta isolata se messa in relazione con i coevi rinvenimenti del Trentino⁹ e con il gruzzolo di *aes grave* del Doss

³ Cfr. M.H. CRAWFORD, *Roman Republican Coin Hoards*, London, 1969.

⁴ O. MENGHIN, *Ein unwallter La Tène Pfahlbau am Ritten*, in *Wiener Prähistorische Zeitschrift*, 1, 1914, p. 71; K.M. MAYR, *Römische Münzen vom Rittnerberg*, in *Der Schlern*, 10, 1929, p. 53; R. LUNZ, *Archäologie Südtirols*, Bozen, 1981, p. 208, nota 448.

⁵ F. ORGLER, *Verzeichniss der Fundorte von antiken Münzen in Tirol und Voralberg*, in *Zeitschrift des Ferdinandeums*, 75, 1878, p. 59-95; A. BARB, *Monete del Ferdinandeum di Innsbruck provenienti dalla Venezia Tridentina*, in *Studi Trentini di Scienze Storiche*, 11, 1930, p. 128-133.

⁶ G. GORINI, *La circolazione del denario repubblicano nell'Agro Veronese*, in *Atti del convegno Verona e il suo territorio in età romana, Verona 22-24 ottobre 1971*, Verona, 1973, p. 495-516; ID., *Aspetti monetali: emissione, circolazione e tesaurizzazione*, in *Il Veneto in età romana*, Verona, 1987, p. 233-245.

⁷ S. DEMETZ, *Zur Bedeutung republikanischer Fundmünzen für die Geschichte des gesamttiroler Raumes*, in *Der Schlern*, 64, 1990, p. 626-633.

⁸ L'esemplare, emesso a Roma secondo il Crawford tra il 217 ed il 215 a.C. e tra il 268 ed il 240 a.C. secondo il Grüber, viene citato da L. ALLAVENA-G. RIZZI, *La strada romana di Elvas*, in corso di stampa.

⁹ P. ORSI, *Le monete romane di provenienza tridentina possedute dal Museo Civico di Rovereto*, Rovereto, 1893; G. ROBERTI, *Monete romane di accertata provenienza trentina nel Museo Nazionale di Trento*, in *Studi Trentini di Scienze Storiche*, 6, 1925, p. 307-317; ID., *Distribuzione topografica delle monete rinvenute in accertate località del Trentino*, in *Studi Trentini di Scienze Storiche*, 29, 1950, p. 317-325.

Trento¹⁰. Sono poi citati un asse e un bronzo repubblicano non meglio specificato¹¹, un probabile semisse attribuito alla fase semionciale¹² ed infine un aureo coniato nel 46 a.C. dal magistrato A. Hirtius¹³. Dall'analisi dei reperti si può ipotizzare qualcosa di più di una semplice presenza sporadica del circolante repubblicano, che sembra aver avuto a livello locale una certa diffusione, sia pure modesta, ma non si può certo parlare di una vera e propria circolazione monetaria capillarmente distribuita, come si verificherà soltanto nel corso dell'età imperiale. Significativa appare la netta prevalenza del numerario in argento, che localmente può forse trovare una parziale spiegazione in una selezione di esemplari a più alto valore reale e a minore valore nominale, che, escludendo i nominali enei, accentua le caratteristiche di riserva di valore e di strumento di capitalizzazione più che di mezzo di scambio dello strumento monetario, rispondendo alle necessità di una situazione economica che ancora non richiede un circolante monetario differenziato per coprire transazioni a tutti i livelli.

Le necropoli di Tires ed Aica di Fiè

Gli esemplari rinvenuti nelle necropoli di Tires ed Aica di Fiè¹⁴ appartengono alla categoria dei rinvenimenti collegati alla pratica dell'obolo di Caronte. I siti si trovano in una vallata laterale dell'Isarco, che metteva in comunicazione le montagne e gli altopiani circostanti con il fondovalle, lungo il quale si snodava una delle più importanti arterie viarie della zona, quella che congiungeva Verona con *Vipitenum*. Il sito di Tires è stato scoperto casualmente nel 1976 ed è stato oggetto di una serie di campagne di scavo condotte per saggi con criterio topografico-selettivo. Si tratta di una necropoli di incinerati databile al I-II sec. d.C., con tombe a fossa ed a pozzetto, oltre ad un'unica tomba a cassetta. I corredi non si possono certo definire ricchi; molto standardizzati ed omogenei rispecchiano potenzialità economiche e culturali modeste ma non assenti. Presentano cinerari fittili (ma anche un cinerario ligneo, uno in pietra ollare ed alcuni in lamina di rame, che non sembrano tuttavia distintivi di particolari condizioni economiche o sociali dei defunti), che contengono una selezione delle ossa combuste, sulle quali vengono disposti due o più vasetti fittili, una o più fibule, le monete, talora un coltellino a lama serpeggiante. Accanto alla presenza di ceramica d'uso comune di produzione locale sono presenti vasi potori di ceramica fine, Henkeldellenbecher, qualche coppa a pareti sottili e qualche frammento di Sigillata Nord-Italica. Rari sono i monili in metalli preziosi (uno in argento ed uno in oro), le armille, le guarnizioni per cintura e gli aghi per cucire. È stato rinvenuto qualche anello in ferro con castone, mentre sembrano assenti le lucerne¹⁵. Rare anche le armi, mentre frequentissime sono le borchiette in ferro appartenenti a calzature o cinture. Sono state rinvenute inoltre una Melonenperle, una coppa in vetro costolata e diversi frammenti in vetro fuso. Significativo il simbolismo funerario, che, accanto al rituale dell'incinerazione, vede la collocazione di arenaria rossa all'interno di alcune

¹⁰ L'interramento del tesoretto viene datato al 212 a.C.; cfr G. GORINI, *Aspetti della circolazione monetaria in età romana nel Trentino: le monete in bronzo*, in *Atti dell'Accademia Roveretana degli Agiati*, 228, 1978, p. 112; M.H. CRAWFORD, *op. cit.*, p. 55, n. 57.

¹¹ Da Castel Firmiano, L. DAL RI, *Appunti sulle scoperte archeologiche riguardanti l'epoca romana nella conca di Bolzano*, in *Scavi nella conca di Bolzano e nella Bassa Atesina 1976-1985, catalogo mostra*, Bolzano, 1986, p. 19, nota 19; da Salorno, A. BARB, *op. cit.* alla nota 5, p. 131.

¹² Da Pietralba, K.M. MAYR, *Römische Münze der Republik aus Weissenstein*, in *Der Schlern*, 27, 1953, p. 44.

¹³ Da Cortina all'Adige, F. ORGLER, *op. cit.*, p. 70 ove l'esemplare viene genericamente attribuito alla gens Hirtia; solo A. Hirtius risulta però aver coniato in oro, nel 46 a.C. Cfr M.H. CRAWFORD, *Roman Republican Coinage*, London-New York, 1974, p. 478, n. 466, tav. LV.

¹⁴ C. MENGOTTI-G. ROSADA, *Material aus römischen Gräbern in Tiers*, in *Der Schlern*, 55, 1981, p. 324-339; G. ROSADA-L. DAL RI (a cura di), *Tires ed Aica. Necropoli di epoca romana*, Verona, 1985.

¹⁵ Alcuni frammenti in ferro dalla T. 27 (I. nr. 756 a-c) sono interpretati ipoteticamente come lucerna.

tombe¹⁶. Lo scavo ha restituito 79 monete, la più antica delle quali è coniatata da Augusto, la più recente da Lucilla (Fig. 2). Tra esse 40 non sono riferibili ad alcun contesto e possono essere soltanto ricondotte alla frequentazione del sito, mentre 39 provengono dalle sepolture. Su 55 tombe scavate 24 contengono monete, con una percentuale del 43,64 %, da considerare elevata per il contesto archeologico locale. La maggior parte (15 tombe) presenta un solo esemplare; due esemplari associati compaiono in 7 casi, mentre le T. 8 e 12 bis hanno restituito rispettivamente 4 e 6 monete, in associazione a corredi al di sopra della media standard rappresentata dalle altre deposizioni. Qui la presenza di più monete appare indicativa di una situazione molto diversa da quella del semplice obolo, della monetina che riveste un valore rituale più che venale; si tratta infatti di vere e proprie dotazioni funerarie. Gli esemplari, in rame e oricalco – esiste un solo esemplare in argento, proveniente, e non è un caso, dal più consistente dei depositi tombali, quello della T. 12 bis – risultano fortemente danneggiati dal fuoco del rogo funebre. Pertanto non è facile riconoscere tracce di «personalizzazione» e di «demonetizzazione»¹⁷,

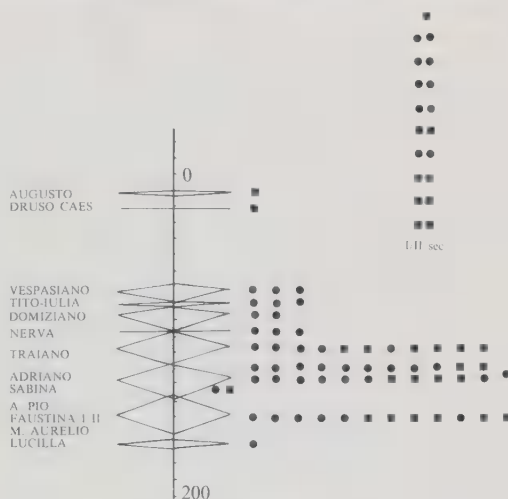


Fig. 2. Tires-necropoli, scavi (1976-1983).

danneggiamenti intenzionali legati al rituale funerario in analogia a quelli praticati sui vasi ed i coltelli, tuttavia gli esemplari nn. 353-354, rinvenuti nella T. 7, mostrano un'identica asportazione di piccola parte del tondello, ed il nr. 155 dalla T. 18, un dupondio di Traiano, una profonda tacca incisa. Significative alcune apparenti incongruenze cronologiche: l'attardamento nell'uso della «Augenfibel» datata al I sec. a.C.-I sec. d.C., che è stata rinvenuta con un dupondio di Adriano nella T. 9, ed un asse di Druso Cesare emesso nel 22 d.C. associato ad una «Kräftig profilierte Fibel» del II-III sec. d.C. nella T. 6, riconducibile al noto fenomeno della frequente sopravvivenza di circolante più antico nel contesto funerario. Per quello che si riesce a distinguere le monete sembrano piuttosto consuete, il che rientra in una pratica comunemente diffusa che vede raramente la collocazione in sepolture di monete in buono stato di conservazione. Diverso appare il caso della pur così vicina necropoli di Aica di Fiè, frequentata dalla fine del I sec. alle soglie del IV sec. d.C., ove la consuetudine dell'obolo di Caronte appare meno radicata. Qui le 28 tombe di incinerati hanno restituito corredi più vari di quelli di Tires, comprendenti, oltre alle consuete ceramiche d'uso comune, agli Henkeldellenbecher ed alle fibule, anelli, sette coltelli, diversi attrezzi d'uso quotidiano (cesoie, scalpelli, un punteruolo, un acciarino in selce), una punta di lancia a foglia ed una punta di proiettile di balista, grumi di pasta vitrea, due stele in arenaria con iscrizioni, e soltanto tre monete:

16. Nelle T. 14, 41, 43, 49 e 52. Per il colore rosso come simbolo di vita e rigenerazione cfr M. GIMBUTAS, *Il linguaggio della dea. Mito e culto della dea madre nell'Europa neolitica*, Firenze, 1990.

17. R. MARTINI, *Monete*, in *Sub ascia, una necropoli romana a Nave*, Modena, 1987, p. 114-119, in particolare alla nota 18.

due nella T. 7, un sesterzio di Marco Aurelio ed una moneta non id., ed una nella T. 16, un dupondio di Massimino il Trace.

Gli scavi di Bolzano-Gries vicolo della Fossa, Egna Laghetti San Floriano, San Lorenzo di Sebato fondo Puenland e Bressanone Stufles 10/B

Lo scavo di Bolzano-Gries vicolo della Fossa¹⁸ presenta tracce di frequentazione sporadica a partire dal VI-V secolo a.C., ma è nella prima età imperiale che in quest'area viene eretta una costruzione di un certo pregio, soppiantata nel III secolo da un altro edificio, dotato di *hypocaustum*; dopo una lunga fase di abbandono il sito viene rioccupato nel XII secolo da un'altra casa dalla pianta piuttosto irregolare soggetta a diversi rifacimenti ed aggiunte¹⁹. Marmi architettonici, tessere di mosaico e laterizi bollati sono stati rinvenuti allo stato residuale in diverse situazioni stratigrafiche, che attestano continui reimpieghi in costruzioni via via più modeste. Lo scavo ha restituito molti reperti relativi alle varie fasi di vita, di occupazione e di abbandono, tra i quali ceramica d'uso comune, Sigillate Sudgalliche ed Africane, Pareti Sottili, vetri, una lucerna bollata, frammenti di anfore, un Henkeldellenbecher, aghi crinali in osso, molte perle di pasta,

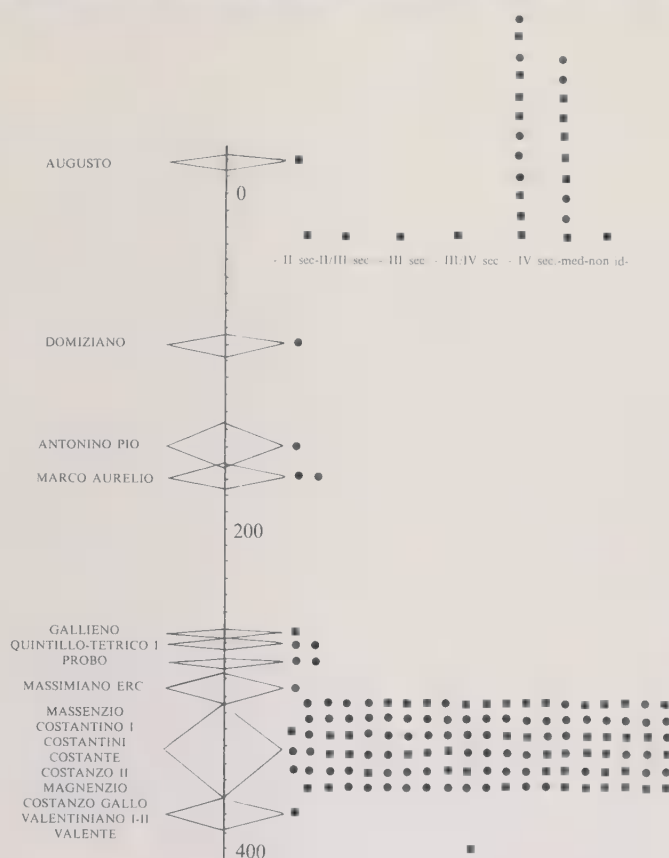


Fig. 3. Bolzano Gries - vicolo della Fossa. Scavo 1981. Distribuzione cronologica, reperti monetali.

¹⁸ M. COLTORTI, *La stratigrafia ed il contesto ambientale del sito archeologico di Vicolo della Fossa a Gries, Bolzano*, in *Scavi nella conca di Bolzano e nella Bassa Atesina, catalogo mostra*, Bolzano, 1976, p. 23-26; M. BONFANTI-L. DAL RI, *Lo scavo di Gries vicolo della Fossa (1981)*, *ibidem*, p. 27-36; L. DAL RI-M. FLORES, *Schede descrittive dello scavo di Gries vicolo della Fossa*, *ibidem*, p. 79-123.

¹⁹ M. BONFANTI-L. DAL RI, *op. cit.*, p. 34 propongono una datazione al VII-VIII secolo; tuttavia a seguito dello studio delle strutture dello scavo di Bolzano Piazza Walther, essa è stata rideterminata al XII secolo, cfr L. DAL RI, *Gli edifici medievali dello scavo di Piazza Walther a Bolzano*, in *Bolzano dalle origini alla distruzione delle mura, atti del convegno*, Bolzano 1991, p. 261.

vitrea, monili, un castone per anello, fibule, e 156 monete²⁰ (Fig. 3). La più antica è un quinario di Augusto emesso a Efeso, la più recente, escludendo quelle del XII-XVI sec. è attribuibile ai Valentiniani, mentre le monete non identificabili sono circoscritte al IV sec. d.C.; mancano i tardi nummi attribuibili ai Teodosi, le monete intaccate ed i minimi, che caratterizzano le situazioni che verranno esaminate successivamente.

Il sito di Egna-Laghetti San Floriano²¹ ha restituito notevoli evidenze di scavo databili prevalentemente al V-VI secolo d.C., ma i rinvenimenti sporadici consentono di ipotizzare una vita dell'insediamento precedente di almeno sei secoli. Ceramiche di importazione, resti architettonici quali marmi lavorati, tracce di impianti di riscaldamento e resti di intonaco dipinto suggeriscono per l'età romana una certa situazione di agiatezza che in epoca tardo antica si affievolisce progressivamente. Questo momento è testimoniato da continui riutilizzi e da costruzioni assai più modeste, analogamente a quanto è stato riconosciuto anche nello scavo di Bolzano-Gries vicolo della Fossa. Delle 85 monete rinvenute²², 66 sono state identificate (da Alessandro Severo ad Arcadio); le restanti, assai consunte, sono attribuite al IV-V secolo d.C. (Fig. 4). Si tratta di esemplari in cattivo stato di conservazione, prevalentemente in bronzo; *folles*, \mathcal{A} -3 ed \mathcal{A} -4, oltre a due sesterzi di Severo Alessandro, agli antoniniani di Gallieno, Claudio II,

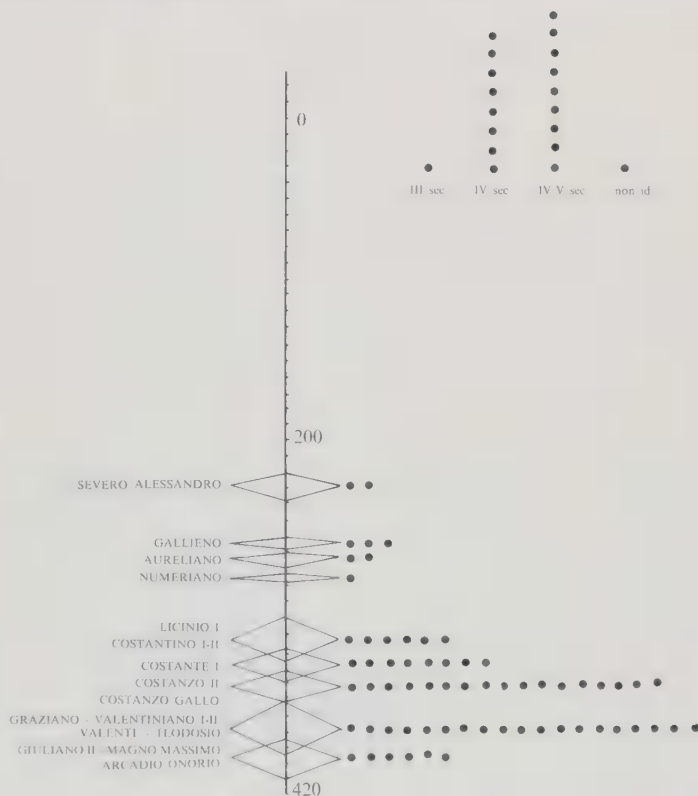


Fig. 4. Egna - Laghetti - S. Floriano. Scavi 1982-1983. Distribuzione cronologica. Reperti monetali.

²⁰ G. RIZZI, *Le monete di Gries-vicolo della Fossa* (1981), in *Scavi nella conca di Bolzano e nella Bassa Atesina 1976-1981, catalogo mostra*, Bolzano, 1986, p. 37-62.

²¹ M. COLTORTI, *La stratigrafia ed il contesto ambientale del sito archeologico di San Floriano presso Laghetti di Egna*, in *Scavi nella conca di Bolzano e nella Bassa Atesina 1976-1985, catalogo mostra*, Bolzano 1986, p. 205-208; M. BONFANTI, *Laghetti di Egna, località San Floriano* (scavi 1982-1983), *ibidem*, p. 209-213; L. DAL RI-M. FLORES, *Schede descrittive dello scavo di Laghetti di Egna*, *ibidem*, p. 235-252.

²² G. RIZZI, *Le monete di Laghetti di Egna*, in *Scavi nella conca di Bolzano e nella Bassa Atesina 1976-1985, catalogo mostra*, Bolzano, 1986, p. 215-229.

Aureliano e Numeriano, e ad una siliqua di Valentiniano II. Va rilevata la presenza di diverse monete intaccate, tosate, divise a metà, o mancanti di una porzione del tondello²³, fenomeno questo che ritroviamo a San Lorenzo fondo Puenland. Qui lo scavo ha messo in luce una casa di epoca tardo romana con *hypocaustum*, a pianta semplice e di modeste proporzioni, ma non priva di un certo decoro, come testimoniano intonaci dipinti e un pavimento a lastre di pietra locale alternate a marmo. All'interno della casa venivano praticate operazioni di molitura, panificazione, tessitura, piccola metallurgia, modeste attività che più che ad una connotazione economica farebbero pensare all'organizzazione autarchica di una piccola proprietà. Tuttavia sono state rinvenute ben 238 monete²⁴: la più antica è un denario emesso da Augusto, la più recente un Æ-4 emesso ad Aquileia da Onorio (Fig. 5). La situazione del materiale, come in vicolo della Fossa ed a Laghetti, mostra uno stato di conservazione nel complesso discreto, con qualche esempio di tondelli intaccati e tosati²⁵; anche qui il nucleo più consistente comprende esemplari databili al IV sec., con qualche testimonianza di nominali di I e II secolo. Tuttavia San Lorenzo Puenland è l'unico sito, tra quelli esaminati, che ha restituito un numero significativo di antoniniani della seconda metà del III secolo, che provengono quasi esclusivamente da strati «alti», relativi a rioccupazioni altomedioevali ed al terreno subagricolo, ove si trovano allo stato residuale, mentre i piani di vita e di calpestio contengono monete di epoca costantiniana e postcostantiniana.

La situazione di Stufles 10/B²⁶ infine è assai particolare: si tratta di uno scavo di emergenza che ha interessato una superficie assai limitata, di circa 20 mq., il che non ha consentito di interpretare le strutture murarie rinvenute, ma che in un'area così ristretta ha restituito ben 168 monete. Più dell'80 % proviene dall'US 27, relativa al battuto in terra pertinente alla struttura di epoca tardoromana, dove sono state rinvenute insieme a ceramica minuta, semi, orzo e vertebre di pesce, elementi questi che hanno consentito di ipotizzare la presenza di un pavimento in assito ligneo che, tra le connessioni delle assi, avrebbe favorito anche lo smarrimento delle monete. Si tratta prevalentemente di Æ-3 ed Æ-4 in cattivo stato di conservazione, oltre ad un tondello non impresso, ad una frazione di siliqua e ad un denario suberato di Caracalla; sono presenti anche minimi di peso inferiore al mezzo grammo, con tipi illeggibili. Lo schema di distribuzione cronologica (Fig. 6) mostra che la maggior parte degli esemplari attribuiti si colloca tra la seconda metà del IV secolo ed il primo decennio del V, mentre per quelli adespoti si propone una datazione tra il IV e la prima metà del VI secolo. La compresenza di esemplari postcostantiniani molto usurati, tosati e frammentati, e dei minimi è infatti caratteristica di contesti databili al V/VI secolo d.C.²⁷, e se da un lato attesta gravi difficoltà

²³ Cfr i nn. 14, 20, 26, 29, 31, 38, 41, 46, 52, 53, 54, 56, 68, 69, 70, 73, 76, 79, 81, 82, 83, 84.

²⁴ G. RIZZI, *Considerazioni sul prolungato uso di moneta romana in relazione alle fasi stratigrafiche e cronologiche di una casa di età tardo romana di Sebatum (a San Lorenzo di Sebatum in val Pusteria, fondo Puenland)*, in *RIN*, 87, 1985, p. 143-193.

²⁵ Cfr i nn. 14, 16, 18, 20, 22, 36, 37, 38, 48, 56, 60, 68, 77, 85, 90, 91, 93, 101, 103, 106, 109, 115, 117, 123, 124, 144, 148, 150, 161, 166, 175, 178, 180, 183, 224, 226, 228, 230, 234, 236.

²⁶ Dello scavo dà notizia L. DAL RI, *Stufles 10/B*, in *Tutela dei Beni Culturali in Alto Adige 1986*, Bolzano, 1988, p. 14.

²⁷ Sul problema dei minimi e della circolazione monetale tra V e VI sec. cfr A. ARZONE, *Verona, monete provenienti dallo scavo archeologico del fabbricato del Monte dei Pegni*, in *Quaderni di Archeologia del Veneto*, 3, 1987, p. 123-134; L. CESANO, *Della moneta enea corrente in Italia nell'ultima età imperiale romana e sotto i re ostrogoti*, in *RIN*, 26, 1913, p. 511-551; EAD., *Ancora della moneta corrente in Italia nel V-VI secolo d.C.*, *ibidem*, 31, 1918, p. 96-100; E. ERCOLANI COCCHI, *La circolazione tra Tardo Antico e Alto Medioevo dagli scavi di Villa Clelia*, in *Studi Romagnoli*, 1978, p. 367-399.; EAD., *Il tesoretto monetale di Salto del Lupo*, in *La civiltà comacchiese e pomposiana dalle origini preistoriche al tardo medioevo*, atti convegno, Bologna, 1986, p. 211-226; W. HAHN, *Ein Minimifund des frühen 6. Jahrhunderts n. Chr. aus Massafra bei Tarent*, in *LNV*, 3, 1987, p. 95-113; J.D. MAC ISAAC, *Weight of the Late Fourth and Early Fifth Century Nummus*, in *ANSMN*, 18, 1972, p. 59-66; P. ORSI, *Ripostiglio*

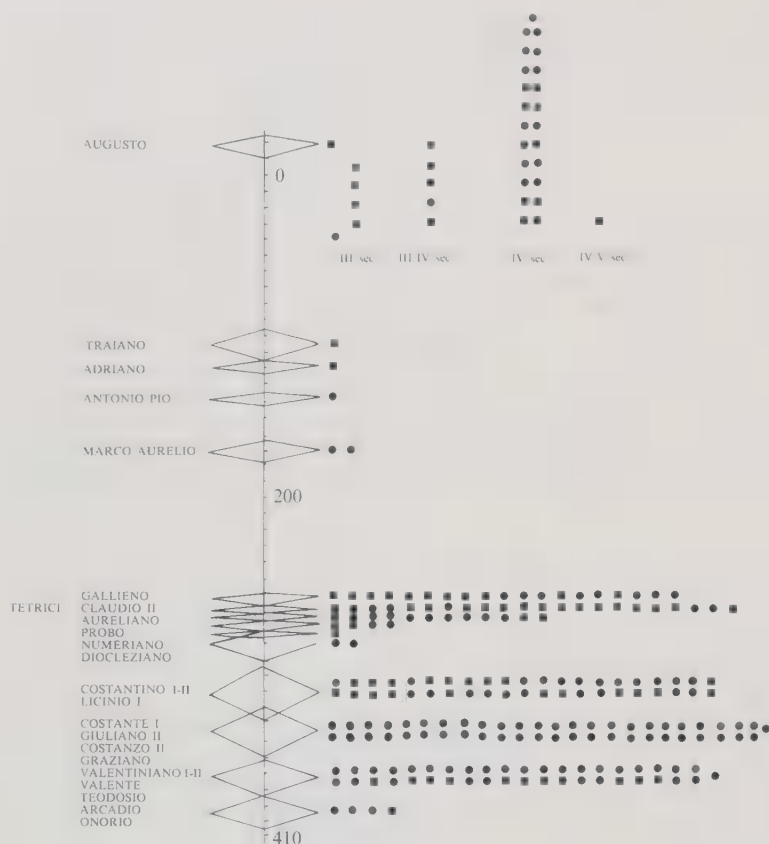


Fig. 5. S. Lorenzo Puenlano. Scavi 1981-1985. Distribuzione cronologica. Reperti monetali.

nell'approvvigionamento del circolante, dall'altro è indizio di una persistente vitalità economica. Va sottolineato inoltre che i rinvenimenti di Stufles 10/B, di San Lorenzo di Sebato fondo Puenland e di Bolzano vicolo della Fossa si configurano quantitativamente come assai consistenti per delle semplici dimore private. Lo scavo di altre case di epoca romana non ha dato in questa regione nuclei che possano essere ad essi paragonabili (da Elvas nessun esemplare, da Villandro, dove lo scavo è ancora in corso, soltanto alcuni), e lo stesso si può notare anche per altri contesti, quali le ville di Russi²⁸ e Settefinestre²⁹. Sembra difficile spiegare una tale quantità di reperti con il loro semplice smarrimento, sia pure favorito dalla presenza di pavimenti in assito ligneo. Una simile percentuale potrebbe essere spiegata da una frequentazione molto intensa, forse legata ad una particolare caratterizzazione dei siti, luoghi di passaggio forse, dove si potevano svolgere particolari attività economiche, che comunque comportavano uno scambio di moneta più frequente che nel ristretto ambito di una comunità familiare, sia pure impiegata in una piccola attività produttiva.

monetale del basso impero e dei primi tempi bizantini rinvenuto a Lipari, in *RIN*, 23, 1910, p. 353-359.

28 G.A. MANSUELLI, *La villa romana di Russi*, Faenza, 1962.

29 A. VITTORIO, *Le monete*, in *Settefinestre. Una villa schiavistica nell'Etruria romana*, III. *La villa e i suoi reperti*, Modena, 1985, p. 255-263.

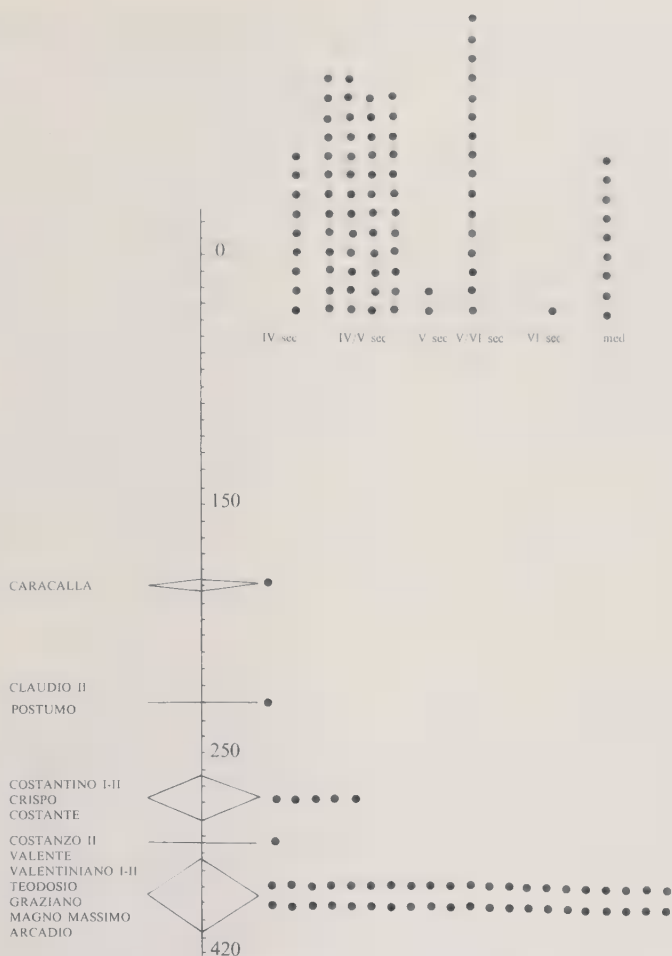


Fig. 6. Stufles10/B. Scavo 1986. Distribuzione cronologica. Reperti monetali.

Conclusioni

I dati desunti da vecchi repertori e da notizie sporadiche, riguardanti i rinvenimenti monetali in ambito locale, consentono di inquadrare le monete provenienti da questi ultimi scavi all'interno di un tessuto di rinvenimenti dalla trama più fitta, e di tracciare alcune linee generali riguardanti la circolazione monetaria in Alto Adige. Il tutto senza alcuna pretesa di esaustività, considerando il fatto che esistono ancora consistenti nuclei inediti, come quello di Stufles A (oltre 700 esemplari prevalentemente di età costantiniana), e che essi sono costantemente accresciuti dai nuovi rinvenimenti. In generale si può affermare che i dati numismatici contribuiscono a suggerire l'immagine di una regione che ha sempre rivestito un ruolo di ponte tra l'area culturale mediterranea e quella centro europea, una regione i cui attuali confini amministrativi non costituiscono di per sé una linea di demarcazione tra diverse realtà, ma che nel nostro caso delimitano soltanto il campo della ricerca. Accanto ad alcuni aspetti distintivi che caratterizzano questa zona, molte infatti sono le analogie con altre situazioni riscontrate in regioni ad essa prossime. La trasposizione grafica dei dati (Fig. 7) mostra che, a fronte di un campione analizzato di 1834 esemplari, le monete greche, magno greche e celtiche costituiscono il quantitativo inferiore: sono 12, rinvenute in 7 diverse località, corrispondenti allo 0,66% del totale³⁰. Certamente sono troppo poche per delineare con certezza linee di scambio ed

³⁰ Una dramma di Istro datata alla metà del IV sec. a.C., K.M. MAYR, *Eine griechische Münze aus der Ruine Greifenstein*, in *Der Schlern*, 16, 1935, p. 444-446; cinque esemplari macedoni da Cortaccia, F. ORGLER, *op. cit.*, p. 69; un sestante emesso a Paestum, P. MAYR, *Römischer*

aree di contatto, e si configurano come una testimonianza sporadica, riconducibile a presenze discontinue, una testimonianza di transito, forse di contatto tra mercanti. Si tratta di fenomeni di accantonamento di ricchezza in una regione che mostra di conoscere la moneta in modo indotto ed indiretto, ove le connotazioni di mezzo di scambio e di pagamento si sfumano mentre parallelamente si accentuano quelle di riserva di valore e di strumento di capitalizzazione, e non di fenomeni di diffusione capillare ed accettazione generalizzata dello strumento monetale, che in questa fase viene prodotto ed utilizzato nel suo pieno significato soltanto ove siano presenti strutture cittadine o insediamenti coloniali di tipo greco. La fase repubblicana con 90 esemplari provenienti da 33 diverse località, corrisponde ad una percentuale del 4,89%. I 1732 esemplari censiti per l'epoca imperiale, rinvenuti in 83 località, corrispondono ad una percentuale del 94,45%. Purtroppo la mancata quantificazione di nuclei che risultano dispersi, come i depositi votivi di Antermoia e di Pervalle³¹ ed il gruzzolo dell'Alpe di Siusi³², rendono meno significativo qualsiasi approccio statistico ai dati, che, nel caso della disciplina numismatica, è comunque fortemente condizionato dalle caratteristiche estrinseche ed intrinseche della moneta e di interpretazione estremamente problematica.



Fig. 7. a. greche - m. greche - celtiche = 12 (0,66%)
b. repubblicane = 90 (4,89%)
c. imperiali = 1732 (94,35%)



Fig. 8. a. Augusto/Commodo = 538 (31,06%)
b. Severo/Diocleziano = 224 (12,93%)
c. Costantino/Onorio = 591 (34,12%)
d. IV sec. = 43 (2,48%)
e. IV, V sec. = 69 (3,98%)
f. V, IV sec. = 17 (0,98%)
g. epoca imperiale non precisata = 250 (14,43%)

Gli esemplari di età imperiale sono stati suddivisi in tre fasce cronologiche (Fig. 8): la prima, da Augusto a Commodo, comprende 538 esemplari, pari al 31,06%, la seconda, da Severo a Diocleziano, vede con 224 esemplari una certa contrazione, e corrisponde al 12,94%, la terza, da Costantino a Onorio, 591, è pari al 34,13%. Inoltre 43 esemplari (pari al 2,48%) sono attribuiti genericamente al IV secolo, 69 (il 3,98%) al IV/V secolo, 17 (lo 0,98%) al V/VI secolo, e 250 (il 14,43%) ad epoca imperiale non precisabile. La prima fascia comprende prevalentemente esemplari in oricalco e rame, indizio di un uso ormai generalizzato del divisionale bronzeo per le transazioni spicciole già nel corso della prima età imperiale. Sono stati censiti 6 esemplari in argento, attribuiti a Vespasiano, Tito, Traiano (2), Adriano e Marco Aurelio, oltre a 6 tra denarii e quinari a nome di Augusto. È menzionato inoltre un aureo coniato da Traiano, proveniente da

Münzfund in Magreid, in *Der Schlern*, 46, 1972, p. 307; quattro esemplari celtici (uno è inedito) in argento, ed uno in oro: R. LUNZ, *Archäologie Südtirols*, Bozen, 1981, tav. 120; G. GORINI, *Neufunde einer keltischen Kleinsilbermünze aus Stufles (Brixen)*, in *Der Schlern*, 51, 1977, p. 367-371. Ad esse va aggiunte la dramma padana di imitazione massaliota di Leuchtenburg. Si tratta di un rinvenimento del quale sono venuta a conoscenza quando questo lavoro era già in bozza, e che quindi grafiche dei dati; cfr R. LUNZ, *Ur- und Frühgeschichte des Pfattener Raumes*, in *Pfatten. Landschaft und Geschichte*, 1991, p. 144.

³¹ Antermoia: F. ORGLER, *op. cit.*, p. 81; R. LUNZ, *Zur Vor- und Frühgeschichte von Abtei und Enneberg mit Ausblicken auf Gröden*, in *Ladinia*, 3, 1979, p. 153. Pervalle: F. ORGLER, *op. cit.*, p. 63; A. BARB, *op. cit.*, p. 132; P. LAVIOSA ZAMBOTTI, *Edizione archeologica della carta d'Italia foglio VII III SO*, 1936, n. 1, p. 30.

³² R. LUNZ, *Archäologie Südtirols*, Bozen, 1981, p. 340, tav. 152.

Funes³³, finora l'unico esemplare in oro databile al I-II secolo. Sono presenti monete coniate da zecche extraitaliche (Efeso, Colonia Patricia, Nemausus e Lugdunum), a riprova di una certa apertura di contatti che non può sorprenderci in una zona da sempre caratterizzata da un'economia di transito.

La seconda fase vede il periodo della grande crisi economica e dell'inflazione, ed è contraddistinta dall'avvento di un nuovo nominale, l'antoniniano, e dall'interruzione della coniazione del divisionale in bronzo sia da parte della zecca di Roma che da parte delle zecche galliche. La tendenza generale è quella di un vertiginoso aumento del circolante, ma i dati finora raccolti sembrano mostrare per l'Alto Adige una tendenza inversa. Soltanto 3 gli esemplari conati in argento: un denario suberato a nome di Caracalla da Stufles 10/B, uno di Severo Alessandro da Colma ed uno dei Gordiani da Fiè³⁴, mentre da Chiusa proviene un aureo sempre a nome dei Gordiani³⁵. Netta è la prevalenza di monete coniate dalla zecca di Roma, ma diverse risultano emesse dall'Imperium Galliarum e dalle zecche di Mediolanum, Cizico, Siscia, Costantinopoli e Cartagine. È noto anche un nummo alessandrino³⁶. L'età costantiniana e tardo imperiale raccoglie la percentuale più elevata degli esemplari censiti. Il circolante è costituito dal follis e dalle sue frazioni, ma a testimonianza di una circolazione nettamente al di sopra delle necessità quotidiane compaiono con una frequenza maggiore rispetto alle fasi precedenti, esemplari in oro. Sono rappresentate soprattutto zecche italiane, ma sono presenti anche esemplari conati in zecche norico/pannoniche, galliche e orientali³⁷.

Ad un momento successivo appartiene il noto tesoretto di solidi e tremissi di San Lorenzo di Sebato³⁸, che copre un arco cronologico che va dalla seconda metà del V alla metà del VI secolo, il cui interrimento viene ipotizzato nel corso del primo decennio di regno di Giustiniano I, con una significativa coincidenza cronologica con l'irruzione in Italia di Teodeberto re dei Franchi. Se da un lato questo gruzzolo non può essere considerato un tassello facente parte della circolazione locale, dall'altro non si presenta del tutto isolato: sono segnalati sempre da Sebato un tremisse di Onorio, ed altre monete d'oro, a nome di un Valentiniano da Bolzano, a nome di Costantino II, di Teodosio I e di Eraclio I e II da Merano, di Valentiniano III da Fiè-Presule, di Zenone da Appiano San Paolo, da Tirolo a nome di Valente e di Giustiniano, oltre ad una moneta d'oro bizantina non meglio precisata da Quarazze e ad un aureo di epoca imprecisata da Naz Sciaves³⁹.

³³ F. ORGLER, *op. cit.*, p. 83, da Vadena proviene un aureo di Nerone del quale ho avuto notizia quando questo lavoro era già stato consegnato, e che quindi mi è stato possibile inserire solo nelle note e non nel testo; cfr R. LUNZ, *op. cit.*, 1991, p. 160-161.

³⁴ Colma, K.M. MAYR, *Archäologisch-epigraphische Notizen*, in *Bozner Jahrbuch*, 1927, p. 155; ID., *Fiè*, in *Zeitschrift des Ferdinandeums*, III, Folge, 25, 1881, p. XXXI.

³⁵ H. NORTHDURFTER, *Der Burgberg von Säben in vor- und frühgeschichtlichen Zeit*, in *Der Schlern*, 51, 1977, p. 28.

³⁶ Da Castelfeder, emesso da Massimiano Ercoleo tra il 286 ed il 308 d.C.; P. MAYR, *Ein römischer Münzfund von Castelfeder*, in *Der Schlern*, 46, 1972, p. 206.

³⁷ G. RIZZI, *La circolazione monetale in età romana nel Trentino alla luce dei recenti rinvenimenti*, in *Beni Culturali nel Trentino*, 4, *Contributi all'Archeologia*, Trento, 1983, p. 147-169.

³⁸ O. ULRICH BANSI, *Monete d'oro del V e del VI secolo rinvenute a Sebato*, in *NotScavAnt*, 15, 1939, p. 150-164.

³⁹ Sebato: tremisse di Onorio, E. BAGIO-L. DAL RI, *Ripresa degli scavi a S. Lorenzo di Sebato in Val Pusteria*, in *Tutela dei Beni Culturali in Alto Adige 1984*, Bolzano, 1985, p. 135-139. Bolzano: a nome di un Valentiniano, L. DAL RI, *Appunti sulle scoperte archeologiche riguardanti l'epoca romana nella conca di Bolzano*, in *Scavi nella conca di Bolzano e nella Bassa Atesina 1976-1985, catalogo mostra*, Bolzano, 1985, p. 20, nota 7. Merano: Costantino II e Teodosio I, F. ORGLER, *op. cit.*, p. 72 e 74; Eraclio I e II, in *Zeitschrift des Ferdinandeums*, III Folge, 25, 1891, p. XXXI. Fiè-Presule: Valentiniano III, in *Zeitschrift des Ferdinandeums*, III Folge, 25, 1891, p. XXXI. Appiano San Paolo: Zenone, F. ORGLER, *op. cit.*, p. 75. Tirolo: Valente e Giustiniano, F. ORGLER, *op. cit.*, p. 80. Quarazze: *Zeitschrift des Ferdinandeums*, III Folge, 25, 1891, p. XXXV. Naz Sciaves: *Archivio per l'Alto Adige*, 1912, p. 324. Un solido di Onorio inoltre proviene da Vadena. Anche questo esemplare, come quelli aggiunti alle note 30 e 33, non è

Particolare interesse riveste anche il rinvenimento nei dintorni di Bolzano di due tremissi longobardi appartenenti al secondo gruppo delle emissioni a nome di Maurizio Tiberio (582-602) ed inquadrabili nel periodo di regno di Alachi, duca di Trento⁴⁰, e di un follis, sempre di Maurizio Tiberio, emesso a Costantinopoli, rinvenuto a San Maurizio presso Bolzano, località che ha restituito anche la testimonianza più tarda di monetazione bizantina, un follis di Giovanni I Tzimiskes databile al 969-976⁴¹. Si tratta comunque nuovamente di testimonianze talmente sporadiche da non poter essere considerate specchio della circolazione monetaria locale, per quanto rarefatta la si possa considerare. È evidente che con il VI secolo le vicende storiche e politiche portano ad una netta e definitiva interruzione dell'afflusso di moneta, creando nella circolazione una lacuna che in questa regione verrà colmata soltanto nella piena età medievale.

inserito nel testo, nelle elaborazioni grafiche e statistiche, poichè ne ho avuto conoscenza quando questo lavoro era già in bozze; cfr R. LUNZ, *op. cit.*, 1991, p. 160-161.

⁴⁰ G. NEGRIOLLI, *Monete longobarde di Pavia nel Museo Nazionale di Trento*, in *Studi Trentini di Scienze Storiche*, 34, 1955, p. 268-272.

⁴¹ P. MAYR, *Neue Funde aus dem «heiligen Winkel» zwischen Moritzing-Siebeneich bei Bozen*, in *Der Schlern*, 51, 1977, p. 483-485.

Coin Circulation in Extremadura during the Republican and High-Imperial Periods

Cruces BLÁZQUEZ CERRATO*

Within a broader study concerning the circulation of currency along the *Vía de la Plata*, we have selected a particular section about an area that we believe will contribute new information. It is undoubtedly worth going even deeper into the material that we have already obtained, yet, for the moment we will limit ourselves to some of the possible aspects which have arisen as a result of the analysis of the coin circulation.

Geographically, we have moved within this regional framework¹ (Fig. 1); chronologically, we have limited ourselves to the period of the Republic and the High Empire, that is, up to the year 192, the end of Commodus' reign and the end of a period of stability and prosperity. Due to the lack of a more numerous material, we have preferred to consider longer time periods.



Fig. 1. Borders of the Extremadura.

Firstly it must be pointed out that although the period immediately prior to the Roman period does not seem to have as much importance in the western Hispanian area as it will have later, some coins of considerable interest have indeed been found, such as an AE from the Aetolian League in *Cáceres el Viejo*². From a statistical point of view, and based on all the numismatic material analysed, the Republican period, in which we have included official Roman coins and those minted in the Peninsula, represents 86.09% of

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¹ In the choice of the territorial borders, before beginning to compile data, there was a limitless number of options. The provincial frontiers changed and the birth of the *conventus* as an administrative entity dates back to the Julio-Claudian period and since the fact that here we have also analysed the coin circulation of the Republican period, when such administrative divisions did not exist, we will avail ourselves of this geographical framework. Although we are aware of the advantages and disadvantages that these involve, we finally decided on this particular geographical framework.

² M. BELTRAN LLORIS, *Problemas de arqueología cacereña. El campamento romano de Cáceres el Viejo. Estudio numismático*, in *Numisma*, 120-131, 1973-1974, p. 255-310; H.J. HILDEBRANDT, *Die Münzen aus Cáceres el Viejo*, in G. ULBERT, *Cáceres el Viejo. Ein spätrepublikanisches Legionslager in Spanisch-Extremadura*, Mainz, 1984, p. 257-297.

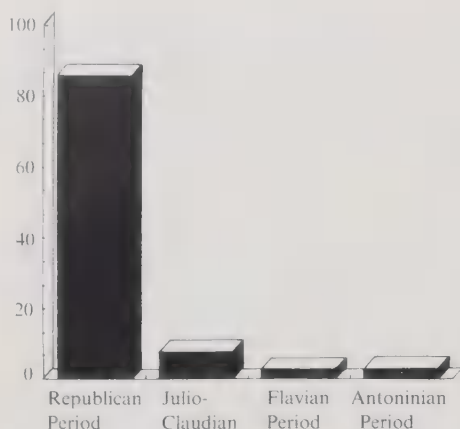


Fig. 2. Chronological distribution in % of the total of coins.

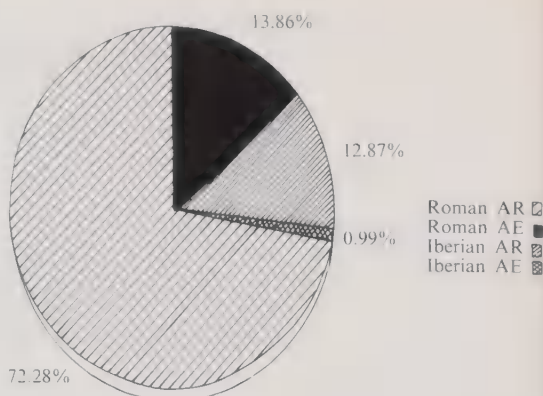


Fig. 3. Coin distribution in the Republican period.

the total amount, whereas the first two centuries of the Empire constitute 13.91% (Fig. 2). All the coins are of known origin, from excavations, isolated finds and private collections.

Within the Republican period, it is important to make a series of distinctions since, of the total amount of material studied (Fig. 3), only 26.73% originate from the mint in Rome. This figure is shared in almost equal parts by the silver and the bronze coinage. On the other hand Iberian currency constitutes 73.27% of the total, with a great difference between the number of silver and bronze coins and also an important difference in number between these coins and those from the official mint. All these data contrast openly with those gathered by R.M.S. Centeno for the northwestern area, where the almost total absence of republican bronze and the significant number of Iberian deniers are points of greatest interest³.

For some time now it has been held that a monetary *vacuum* existed in the zone between the Tajo river and the Guadiana river. This idea, which undoubtedly stems from the deep ignorance of the pre-Roman period, and in particular, the Second Iron Age in this zone, can now be ruled out. This period was considered somewhere between the end of the Orientalising Period and the contact with the Roman world. Yet, recent studies, especially in Extremadura, have provided us with a general view that is of great interest due to the novelty of its character. Now we know that during the Second Iron Age Extremadura was densely populated and that the greater part of these nuclei of settlements, whether for economic or strategic reasons, seem to have survived up to the period of the High Empire and that although coins from the High Empire do not usually appear in them, examples of Roman pottery (*sigillata*, common, etc.) literally flood the surface and upper levels of these settlements. In most cases the final moment of these nuclei came when they were abandoned in favour of a systematic occupation of the plain.

The map showing the distribution of Republican coin finds (Fig. 4) presents a very uneven intensity, possibly due to the existence of areas which have not yet been sufficiently explored. Nevertheless, the area corresponding to the present day province of Cáceres shows a great concentration of finds, and on analysing such sites we have been able to verify that they were situated in the most important mining areas of this region. In



Fig. 4. Distribution of coin finds from the Republican period.

1. Caparra; 2. El Berrocalillo (Plasencia); 3. Holguera; 4. Gata; 5. La Gomana; 6. Castillejo de la Orden (Alcántara); 7. El Castillejo (Santiago del Campo); 8. Santa Ana (Monroy); 9. La Burra (Torrejón el Rubio); 10. Aliseda; 11. Cáceres el Viejo; 12. Muda el Pelo (Sierra de Fuentes); 13. Villasviejas del Tamuja (Botija); 14. Charca de Santa Ana (Trujillo); 15. Salvatierra de Santiago; 16. Alcuéscar; 17. Tamurejo; 18. Las Minillas (Garlitos); 19. Ruecas; 20. Medellín; 21. Cerro de la Herradura (San Pedro de Mérida); 22. El Chorlito (Oliva de la Frontera); 23. Castrejón de Capote (Higuera la Real); 24. Nertobriga (Fregenal de la Sierra).

Extremadura, although not of great importance as a mining district within Hispania, four distinct mining areas can be distinguished⁴ (Fig. 5) :



Fig. 5. Roman mining sites in Extremadura (according to J.M. Fernández Corrales).

⁴ J.M. FERNÁNDEZ CORRALES, *El asentamiento romano en Extremadura y su análisis espacial*, Cáceres, 1988, p. 102-112 y 165-172; J.C. EDMONSON, *Two Industries in Roman Lusitania : Mining and Garum Production* (BAR, 362), Oxford, 1987.

- the first, and perhaps the most striking because of the presence of gold, would be situated in the area of the Tajo river, some of its tributaries and the Sierra de Gata, sites which we know from Latin sources;

- the second corresponds to the western granitic hills near Portugal (area of Aliseda, Alcántara and Alburquerque);

- the third would be within the area made up of Cáceres, Trujillo and Montánchez and the eastern part of the province;

- and the fourth, seldom mentioned in classical sources, yet perhaps the most important as to extractions and their value, is located in the east and southeast of the province of Badajoz.

On detailed analysis of the coins from this period, we have been able to verify that the major part comes from the Tanusia mint, which is quite natural if we consider that this mint was located in Las Villasviejas del Tamuja (Botija, Cáceres)⁵. The distribution of the rest of the peninsular mints deserves further mention, since two focal points of origin can be distinguished (Fig. 6 and 7): one situated in Baetica, and fed chiefly by the Castulo mint, followed by that of Obulco. Once again we find ourselves with a greater number of pieces from Castulo, a fact which has already been observed in the mining habitats of Sierra Morena and Riotinto⁶. As for the Obulco coins, it must be pointed out that they almost always appear along with Castulo coins, both in the mining areas of Baetica and in the south of Portugal or the Guimaraes region. Another mint with an important representation is that of Corduba. As can be observed in the corresponding graph, the remainder of the coins from the south is a varied and scanty representation of Punic and Latin mints, the most outstanding of which is Ilipense, a mining centre already mentioned by Strabon⁷.

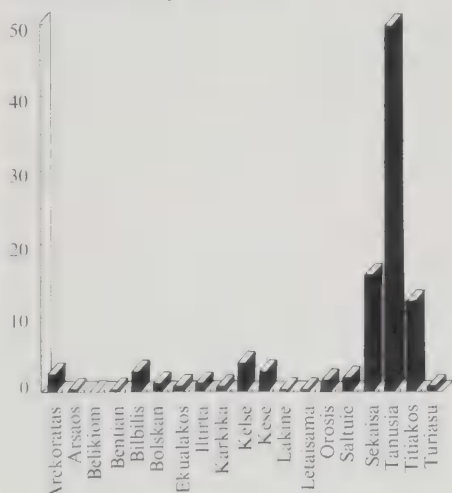


Fig. 6. Iberian coin percentages.

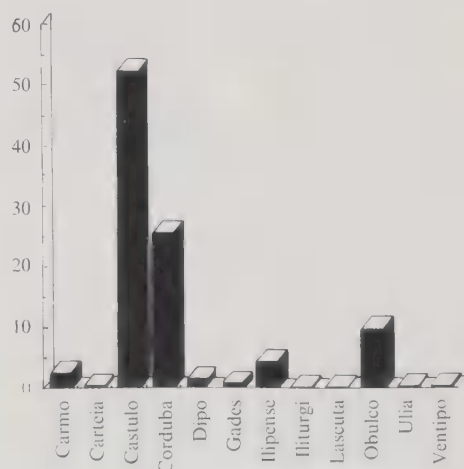


Fig. 7. Baetican coin percentages.

The other focal point for the origin of coins is located in Celtiberia and in the Ebro Valley (Fig. 6): thus we have tracked down pieces from Sekaisa, Titiakos, Arekoratas, Bilbilis, Kelse and Kelse among others. The percentage of coins from these mints is significant, especially in the case of those from Sekaisa and Titiakos, bronze coins which

⁵ J.L. SANCHEZ ABAL, y GARCIA JIMENEZ, *La ceca de Tanusia*, in *Actas I Congreso Peninsular de Historia Antigua*, Santiago de Compostela, 1988, vol. 2, p. 149-170.

⁶ M.P. GARCIA-BELLIDO, *Las monedas de Castulo con escritura indígena*, Barcelona, 1982, p. 95-137; Fr. CHAVES TRISTAN, *Aspectos de la circulación monetaria de dos cuencas mineras andaluzas: Riotinto y Castulo (Sierra Morena)*, in *Habis*, 18, 1987-1988, p. 613-637.

⁷ M.P. GARCIA-BELLIDO, *Nuevos documentos sobre minería y agricultura romanas en Hispania*, in *ArchEspArq*, 59, Madrid, 1986, p. 16-17.

have finally filled the monetary *vacuum* which existed up to now. This is also somewhat similar to the case of the Kese coins in the Sierra Morena⁸.

This panorama is very much like the one offered by the mining areas situated to the north and west of Baetica; we are referring to Diógenes (Solana del Pino, Ciudad Real) and to La Loba (Fuenteovejuna, Córdoba); in both of them a movement which is much more linked to Citerior can be observed, although theoretically they are included within the limits of Baetica.

Up to the present these finds in the province of Cáceres have been considered to be disconcerting and it was thought that they did not correspond to local circulation, but rather that they were coins that had been brought by itinerant travellers⁹. We believe that this collection of numismatic specimens reached this area as a result neither of commercial exchange nor of military campaigns in Lusitania, but more likely in relation to the migratory movement in the mining areas, where coins are customarily used¹⁰.

As for the official republican coins, it is important to point out their scanty percentage (26.73%) in relation to those minted in the Peninsula and the balanced ratio between the silver and bronze pieces. The peripheral location of Lusitania probably caused the Roman coins to reach this area later than the other regions, evidence of which is given by the composition of the Lusitanian hoards. In the period prior to the year 150 B.C. there is an almost total predominance of the bronze coinage; from 150 to 100 B.C. the supply increases, yet this time the most important role is played by the *denarius*. However, *denarii* corresponding to the first century B.C. are rather scarce. This must be seen in relation to the Sertorian campaigns, since at one time the zone of action was located in the centre of the province of Cáceres, as is attested by the hoards of Monroy and Valdesalor, and yet later the scene of action shifts to the west and with it the currency, part of which remain hidden in Portuguese Lusitania¹¹. In other words, the Roman *denarii* enter with the army, but on reaching areas where coin usage does not exist these coins continue to move on, first to the west and later to the north.

In order to analyse the High Imperial period we have divided the numismatic material into three phases corresponding to the imperial dynasties. First we shall consider separately the period of Augustus and the Julio-Claudians, since this represents a complete phase with well-defined beginning and end. This period accounts for 8% of the total number of coins. At no time does there exist a greater coin relationship with Rome than with the rest of Hispania. In general we can affirm that the role played by the Hispano-Roman issues seems to have been extremely important, as these coins must have comprised a mass of denominations which circulated in a way parallel to that of the Republican *denarii* and the coins of the High Roman Empire. After examination of the total number of Hispanian coins we can see that 57% are from the Augustus period, 30% from the Tiberius period and only 3% from the Caligula period. The mint of the capital, Emerita Augusta, covered the demand with its abundant issues. During the reign of Tiberius there is an increase in the number of coins from the mints of the Ebro valley (Bilbilis, Calagurris, Turiasso, Osca and Caesaraugusta), a fact which can be related to the greater activity of these mints during this period. Nevertheless, one must not forget the negative importance of the reduction of the Baetic-Lusitanian mints. As we have already pointed out, one must not think in terms of an absence or scarcity of coins but rather of a continuation of earlier currency.

⁸ *Ibidem*, p. 34-38.

⁹ L. VILLARONGA, *El hallazgo de monedas. El caso de Tanusia*, in *GacNum*, 97-98, 1990, p. 79-84.

¹⁰ M.P. GARCIA-BELLIDO, *op. cit.*, n. 6; M.A. MARTIN BUENO, *Circulación monetaria en la región leonesa: Problemas numismáticos en el NW*, in *Lancia*, 1, León, 1984, p. 187-198.

¹¹ Cf. reference to hoards in C. BLÁZQUEZ CERRATO, *Tesorillos de moneda romano-republicana en la P. Ibérica. Addenda a Roman Republican Coinage*, in *ActaNum*, 17-18, 1988, p. 105-142.

On the other hand, it is important to mention the flourishing of the Claudius I coins of local imitation which, undoubtedly, were meant to compensate for the closing of the municipal workshops and which constituted a very strong contribution towards the middle of the first century A.D.

The total number of coins from the Flavian dynasty is quite reduced, contributing only 3% to the total and all of these are basically bronze coins. It is a relatively small percentage, but it must be kept in mind that this period is much shorter than the previous one. All the emperors are represented, although the majority corresponds to Domitianus. This is in perfect accordance with the general tendency observed in Hispania, with the exception of the northwestern region where the most numerous coins are those of Vespasian as in the Germanic *limes*¹². The principal mint during this period is Rome and the predominant denominations are *asses* and *sestercii*.

During the dynasty of the Antonines, the provisioning is similar to that of the previous period, also 3%, but covering a chronologically longer time period. Two very clear moments must be distinguished : on one hand, the reigns of Nerva, Trajanus and Hadrianus with a very regular rate, and on the other, the following reigns of Antoninus Pius, Marcus Aurelius, Lucius Verus and Commodus, where a decrease can be noted. There is a change in the denominations circulating : now there is a predominance of *sestercii* over *asses*; the silver coinage experiments a slight increase with respect to the Flavian and the Julio-Claudian periods. The greatest volume is reached under the rule of Hadrianus, the second greatest under Trajanus. This percentage of a greater provisioning under Hadrianus is also observed in the northwestern zone¹³.

In general it can be said that the second century A.D. represents a certain decrease in the provisioning, although this is not so great as one might first think if it is looked upon as a purely Roman product. It must be kept in mind that the first century A.D. reaches a higher quantity as a result of the provincial mints and the local imitations of Claudius I, all this constituting a monetary mass that will be in circulation at least until the beginning of the Antoninian period.

¹² R.M.S. CENTENO, *op. cit.*, n. 3, p. 256; J.M. GURT ESPARRAGUERA, *Clunia III. Hallazgos monetarios* (EAE, 145), Madrid, 1985, p. 81-82.

¹³ R.M.S. CENTENO, *op. cit.*, n. 3, p. 265-279.

MONNAIES ROMAINES

2. EMPIRE

Die Erneuerung des imperiums des Augustus und ihre Auswirkungen auf die Münzpropaganda

Barbara SIMON*

Als Oktavian in der Senatssitzung am 13. Januar 27 v. Chr. die Leitung des Staates aus seiner Machtbefugnis in die des Senats und des Volkes überantwortete, gehörte zu dieser *restitutio rei publicae* auch die Rückgabe aller Provinzen in die Verfügungsgewalt des Senats¹. Kurz darauf wurden dem jetzt Augustus genannten jedoch die militärisch wichtigsten Provinzen, Spanien, Gallien, Syrien und Ägypten, in denen die Mehrzahl der römischen Truppen stand, vom Senat wieder zur Verwaltung übergeben. Ob Augustus seine Provinzen kraft eines prokonsularischen Imperiums oder aber in seiner Eigenschaft als Konsul verwaltete, ist umstritten². Diese Maßnahme wurde begründet durch die Notwendigkeit, die betreffenden Provinzen vor inneren Unruhen oder der Bedrohung durch äußere Feinde zu schützen. Sie knüpfte sich also an eine außenpolitische Aufgabe, die Augustus zunächst für den begrenzten Zeitraum von zehn Jahren übertragen wurde. Obwohl Augustus bei der Übergabe den Eindruck erweckte, eine endgültige Rückgabe der von ihm verwalteten Provinzen an den Senat könne schon vor Ablauf dieser Frist erfolgen³, theoretisch also die Möglichkeit einer vorzeitigen Beendigung dieses außerordentlichen Militärkommandos bestand, wurde das *imperium militiae* des Augustus immer wieder für jeweils 5 bis 10 Jahre verlängert⁴, so daß er faktisch auf Lebenszeit in Besitz des militärischen Oberkommandos in den «kaiserlichen» Provinzen blieb.

Die Jahre, in denen Cassius Dio von einer Verlängerung der Gewalten des Augustus berichtet, 18, 13 und 8 v. Chr., sowie 3 und 13 n. Chr.⁵, zeigen, daß die Fristverlängerung immer schon im Jahr vor dem Ablauf der Vollmacht per Gesetz erfolgte⁶. Augustus bereitete diese Termine stets sorgfältig vor und war zum Zeitpunkt der Prolongierung immer in Rom anwesend⁷. Die Übereinstimmung mit den Daten wichtiger innenpolitischer Veränderungen, wie z.B. den *lectiones senatus*⁸, wurde schon früh bemerkt. Weniger beachtet wurde bisher jedoch die Legitimierung durch militärische Erfolge in der Münzprägung des Augustus. Die Bildtypen der Jahre kurz vor der Verlängerung des militärischen Imperiums zeigen besonders deutliche Hinweise auf die

* Ludwigshafen.

¹ Zu den Ereignissen vgl. W.K. LACEY, *Octavian in the Senate, January 27 B.C.*, in *JRS*, 64, 1974, S. 176-184; D. KIENAST, *Augustus. Prinzeps und Monarch*, Darmstadt, 1982, S. 71-84.

² Die Übertragung eines besonderen *imperium proconsulare* für diese Aufgabe wird in der neueren Literatur von der Mehrzahl der Autoren vertreten, vgl. dazu z. D. KIENAST, *Augustus a.O.*, S. 74. Dagegen jetzt zu Recht K.-M. GIRARDET, *Die Entmachtung des Konsulates im Übergang von der Republik zur Monarchie und die Rechtsgrundlagen des augusteischen Prinzipats*, in *Pratum Savariense. Festschrift P. Steinmetz*, Stuttgart, 1990, S. 89-126 bes. 104-121, der die Wahrnehmung der außenpolitischen Aufgaben des Augustus in seiner provincia durch dessen Amtsbefugnisse als Konsul, ab 19 v. Chr. durch das zu diesem Zeitpunkt verliehene *imperium consulare* ermöglicht sieht. Eine ausführliche Diskussion dieser staatsrechtlichen Frage kann im Rahmen der hier vorliegenden Untersuchung nicht untergebracht werden, ist aber für die Frage der Verlängerung des militärischen Oberbefehls auch von untergeordneter Bedeutung.

³ Cass. Dio, 53, 13, 1.

⁴ Cass. Dio, 53, 16, 2 f.

⁵ 18 v. Chr. : Cass. Dio, 54, 12, 4. - 13 v. Chr. : kein direktes Zeugnis (vgl. unten Anm. 23). - 8 v. Chr. : Cass. Dio, 55, 6, 1. - 3 n. Chr. : Cass. Dio, 55, 12, 3. - 13 n. Chr. : Cass. Dio, 56, 28, 1.

⁶ A. PIGANIOL, *Les pouvoirs constitutionnels et le principat d'Auguste*, in *JSav.* 1937, S. 150-151 (= G. BINDER [Hrsg.], *Saeculum Augustum*, I, Darmstadt, 1987, S. 141-142).

⁷ H. PELHAM, *Essays in Roman History*, Oxford, 1911, S. 61.

⁸ H. PELHAM, a.O., S. 63-64; D. KIENAST, *Augustus a.O.*, S. 100 Anm. 132. ID., *Der Regierungsantritt des Tiberius*, in *Lagom. Festschrift P. Berghaus*, Münster, 1981, S. 45-46.

Erfolge des Princeps als dem obersten Feldherrn, wie im folgenden kurz dargelegt werden soll.

Die erste Verlängerung des militärischen Oberbefehls stand 18 v. Chr. an. Zwei Jahre zuvor hatte Augustus auf diplomatischem Wege die Rückgabe der bei Carrhae an die Parther verlorenen Feldzeichen erreicht⁹. Es ist bezeichnend, daß Augustus dieses Ereignis nach dem Bericht von Cassius Dio «wie einen militärischen Sieg» feierte¹⁰. Im Anschluß daran bereiste er zunächst den Osten und kehrte erst Ende 19 v. Chr. nach Rom zurück, wo ihn eine Vielzahl von Ehrungen durch den Senat erwartete¹¹. Im folgenden Jahr begann der Princeps, noch unter dem Eindruck des Sieges im Osten, Vorbereitungen für eine Verlängerung seiner militärischen Macht zu treffen¹².

In diesem Zusammenhang ist die im Jahr 18 v. Chr. einsetzende Edelmetallprägung der *Illviri monetales* zu sehen¹³. Die Münzmeister des ersten Kollegiums, P. Petronius Turpilianus, L. Aquilius Florus und M. Durmius¹⁴, betonten mit ihren Münzbildern besonders stark die aktuellen außenpolitischen Erfolge im Osten. Der am häufigsten auftretende Bildtypus des kniefällig ein Feldzeichen darbietenden Parthers (Abb. 1)¹⁵ bot dem Betrachter eine Vorstellung des unterworfenen Erzfeindes im Osten, die zwar auch in der zeitgenössischen Dichtung¹⁶ und später sogar noch in den *Res Gestae* des Augustus¹⁷ übernommen wurde, mit der Realität aber nichts zu tun hatte.

In gleicher Weise wurde auch die Einsetzung eines Klientelkönigs in Armenien wie ein triumphaler Sieg für den Feldherrn Augustus propagiert, obwohl auch in diesem Fall die Lösung ohne direktes militärisches Eingreifen Roms erreicht wurde¹⁸. Augustus ließ diesen Erfolg mit dem Schlagwort ARMENIA CAPTA feiern – eine deutliche Anspielung auf die Propaganda des Marcus Antonius, der sich seines fehlgeschlagenen Armenienfeldzugs mit der Münzlegende ARMENIA DEVICTA gerühmt hatte¹⁹. Analog zu dem knienden Standartenträger der Partherpropaganda wurde auf den Münzen des gleichen

- 9 Zur Rückgabe der Feldzeichen vgl. vor allem D. TIMPE, *Zur augusteischen Partherpolitik zwischen 30 und 20 v. Chr.*, in *Würzburger Jahrbücher für die Altertumswissenschaft*, NF 1, 1975, S. 161-169; A.N. SHERWIN-WHITE, *Roman Foreign Policy in the Roman East 168 B.C. - A.D. 1*, London, 1984, S. 322-328; R.M. SCHNEIDER, *Bunte Barbaren*, Worms, 1986, S. 30 Anm. 91 mit weiterer Lit. H. SONNABEND, *Fremdenbild und Politik*, Frankfurt, 1986, S. 197-203.
- 10 Cass. Dio, 54, 8, 2.
- 11 Cass. Dio, 54, 10, 3.
- 12 Die Verbindung zwischen der Verleihung des *imperium proconsulare* und militärischem Erfolgsdruck wird auch von D. KIENAST, *Augustus a.O.*, S. 275 erkannt. Zustimmung H. SONNABEND a.O., S. 204.
- 13 Zur Datierung der Münzprägung der *Illviri monetales*: H. MATTINGLY, *BMC Emp. I*, 1923, repr. 1965, S. CI ff.; F. PANVINI ROSATI, *Le emissioni in oro e argento dei «tresviri monetales» di Augusto*, in *Arch. Class.*, 3, 1951, S. 66-85; K. KRAFT, *Zur Datierung der römischen Münzmeisterprägung unter Augustus*, in *Mainzer Zeitschrift*, 46/47, 1951/52, S. 28-35 (= ders., *Kleine Schriften II* [1978] 42-56).
- 14 Zur Datierung des Kollegiums vgl. die bei R.M. SCHNEIDER, a.O. Anm. 91 genannte Lit.
- 15 *BMC Emp. I* 3, 10-4, 17, 8, 40-42, 11, 56-59; *RIC* 12, 62, 287-9. Zum Bildtypus R.M. SCHNEIDER, a.O., S. 29-45; J.P.A. VAN DER VIN, *The Return of Roman Ensigns from Parthia*, in *BABesch*, 56, 1981, S. 126-127.
- 16 Vgl. dazu M. WISEMANN, *Die Parther in der augusteischen Dichtung*, Frankfurt, 1982, S. 137; E.S. GRUEN, *Augustus and the Ideology of War and Peace*, in R. WINKES, *The Age of Augustus*, Louvain-la-Neuve-Providence, 1986, S. 64-66; R.M. SCHNEIDER, a.O., S. 94-95; H. SONNABEND, a.O., S. 243 Anm. 60.
- 17 *Res Gestae Divi Augusti*, 29, 2.
- 18 Vgl. zu den Ereignissen M. PANI, *Roma e i re d'Oriente da Augusto a Tiberio*, Bari, 1972, S. 17-23; M.-L. CHAUMONT, *L'Arménie entre Rome et l'Iran. I. De l'avènement d'Auguste à l'avènement de Dioclétien*, in *ANRW II* 9,1, 1976, S. 73-84; A.N. SHERWIN-WHITE, a.O. (s.o. Anm. 9), S. 322-328.
- 19 K. CHRIST, *Antike Siegesprägungen*, in *Gymnasium*, 64, 1957, S. 511-515.

Kollegiums ein kniefälliger Armeniers dargestellt (Abb. 2)²⁰. Auch hier wurde also ein Eindruck der Unterwerfung des östlichen Volkes unter die römische Herrschaft verbreitet, der der politischen Realität widersprach.

Die enge Verknüpfung zwischen dem Parthersieg, der die Verlängerung des militärischen Oberbefehls rechtfertigen sollte, und der Rückgabe der Gewalten, die diese Übertragung erstmals bewirkt hatte, wird schließlich in einem Bildtypus der sog. «spanischen» Münzstätten²¹ verdeutlicht, der den *clipeus virtutis*, eine der bedeutendsten Ehrungen für Augustus nach der *restitutio rei publicae*, mit den Feldzeichen und der Legende SIGNIS RECEPTIS verbindet (Abb. 3)²².



Abb. 1. Denar des P. Petronius Turpillianus, 19 v. Chr. MuM Auktion 38, Nr. 311. Neg. : Fotoarchiv am Seminar für Griechische und Römische Geschichte, Abt. II, der Universität Frankfurt am Main; 2. Denar des P. Petronius Turpillianus, 19 v. Chr. Nach : J.-B. GIARD, *Catalogue des monnaies de l'Empire romain I. Auguste*, Paris, 1988, Taf. VII, Nr. 140a; 3. Denar einer «spanischen» Münzstätte, 19-18 v. Chr. MuM Auktion Slg Niggeler II, Nr. 1069. Neg. : Fotoarchiv am Seminar f. Griech. und Röm. Gesch., Abt. II, Univ. Frankfurt am Main; 4. Denar des L. Mescinius Rufus, 16 v. Chr. MuM Auktion Slg. Niggeler II, Nr 1043. Neg. : Fotoarchiv am Seminar f. Griech. und Röm. Gesch., Abt. II, Univ. Frankfurt am Main; 5. Denar aus Lugdunum, 15 v. Chr. MuM Auktion 38, Nr 334. Neg. : Fotoarchiv am Seminar f. Griech. und Röm. Gesch., Abt. II, Univ. Frankfurt am Main; 6. Denar des C. Marius, 13 v. Chr. MuM Auktion 38, Nr 331. Neg. : Fotoarchiv am Seminar f. Griech. und Röm. Gesch., Abt. II, Univ. Frankfurt am Main; 7. Denar einer «spanischen» Münzstätte, 19-18 v. Chr. MuM Auktion Slg Niggeler II, Nr. 1048. Neg. : Fotoarchiv am Seminar f. Griech. und Röm. Gesch., Abt. II, Univ. Frankfurt am Main; 8. Denar des L. Caninius Gallus, 12 v. Chr. MuM Auktion 52, Nr 536. Neg. : Fotoarchiv am Seminar f. Griech. und Röm. Gesch., Abt. II, Univ. Frankfurt am Main; 9. Aureus des L. Caninius Gallus, 12 v. Chr. Nach : J.-B. GIARD, op. cit., Taf. XXVI, Nr. 559b; 10. Denar aus Lugdunum, 8 v. Chr. Nach : J.-B. GIARD, op. cit., Taf. LX, Nr. 1456a; 11. «Triumphales» des P. Lurius Agrippa, 8/7 (?) v. Chr. Foto Chr. Pieterek nach Gips, British Museum, London; 12. Aureus aus Lugdunum, 13 n. Chr. Nach : J.-B. GIARD, op. cit., Taf. LXVII, Nr. 1686.

²⁰ BMC Emp. I 4, 18 - 5, 21. 8, 44; RIC 12 62, 290-292. 63, 306. - Zum Bildtypus vgl. M.L. CHAUMONT, a.O., S. 75; R.M. SCHNEIDER, a.O., S. 38; W. TRILLMICH, *Münzpropaganda, in Kaiser Augustus und die verlorene Republik*, Ausst.-Kat. Berlin, 1988, S. 517 zu Nr. 345.

²¹ Die Datierung und vor allem die Lokalisierung der von L. LAFFRANCHI, *La monetazione di Augusto*, in RIN, 25, 1912, S. 155-170 spanischen Münzstätten zugewiesenen Prägungen ist stark umstritten. Vgl. dazu J.-B. GIARD, *Bibliothèque Nationale. Catalogue des Monnaies de l'Empire Romain Bd I. Augustus*, Paris, 1976, S. 12-13; A. BURNETT, *Catalogues, Coins and Mints*, in JRS, 68, 1978, S. 176-177; W. TRILLMICH, a.O., S. 511 zu Nr. 334.

²² BMC Emp. I 72, 416-423; RIC 12 47, 85-87.

Die Maßnahmen zur Steigerung des militärischen Ansehens des Princeps waren erfolgreich : das Imperium wurde um fünf weitere Jahre verlängert²³. Schon zwei Jahre später begann der Princeps mit neuen außenpolitischen Aktionen, um die Prolongierung des militärischen Oberbefehls zu rechtfertigen : daß bei seinem wohl schon länger vorbereiteten Aufbruch nach Gallien im Jahre 16 v. Chr.²⁴ kriegerische Auseinandersetzungen erwartet wurden, zeigt die Münzpropaganda dieses Jahres in Rom und in den sog. «spanischen» Münzstätten : die *vota pro salute et reditu* wurden vorrangiges Thema des Jahres 16 v. Chr. und mit dem Bild des Sieghelfers und Kriegsgottes Mars verbunden²⁵ (Abb. 4), wobei der Gott im gleichen Typus dargestellt wurde wie auf den sog. «spanischen» Prägungen anlässlich des Parthererfolgs²⁶. Auch die Art und Weise, in der das Thema der 15 v. Chr. begonnenen Alpenfeldzüge des Drusus und des Tiberius auf Aurei und Denaren der damals gerade eröffneten Münzstätte Lugdunum (Abb. 5)²⁷ behandelt wurde, macht seine Bedeutung bei der Verlängerung des auslaufenden Imperiums deutlich : die Stiefsöhne des Princeps werden als untergeordnete Feldherrn dargestellt, während Augustus' Position als oberster Befehlshaber durch seinen überhöhten Sitz auf einem Podium verbildlicht wird²⁸.

In der stadtrömischen Münzstätte war während Augustus' Abwesenheit kein Edelmetall geprägt worden, die Münzpropaganda setzte also dort erst nach der Rückkehr des Princeps aus Gallien 13 v. Chr. ein²⁹. Der Senat hatte diese ebenso triumphal gestaltet wie die Ankunft aus dem Osten im Jahre 19 v. Chr.³⁰, obwohl die Aktionen des Princeps im Westen in Form der Neuorganisation der Provinzen Spanien und Gallien weit weniger spektakulär waren. Auch in der Münzprägung lassen sich Analogien zur Partherpropaganda finden : so tritt auf dem häufigsten Rückseitentypus des Münzmeisters C. Marius (Abb. 6)³¹ an die Stelle der auf «spanischen» Münzen abgebildeten Triumphalquadriga mit den zurückgewonnenen Feldzeichen (Abb. 7)³² ein Triumphwagen mit Palmzweig im Innern. Deutlicher konnte die Anknüpfung an den früheren Sieg nicht verbildlicht werden. Im darauffolgenden Jahr nahm der Münzmeister L. Caninius Gallus das Motiv des kniefälligen Barbaren (Abb. 8)³³ wieder auf, diesmal auf

23 Nach Cassius Dio, 54, 12, 5 wurde Augustus «schon kurze Zeit später» eine Verlängerung um weitere fünf Jahre zuteil, so daß sich wieder die Gesamtzahl von zehn Jahren ergeben hätte. Wann dies der Fall gewesen sein soll, erwähnt Dio nicht, er belegt aber für das Jahr 13 v. Chr. nur die Erweiterung der Machtbefugnisse des Agrippa (54, 28). Trotzdem muß die Verlängerung des Imperiums in diesem Jahr erfolgt sein, wie sich aus den sorgfältigen Vorbereitungen des Princeps schließen läßt, die Kienast, *Lagom a.O.*, S. 45-46 ausführt.

24 Cass. Dio, 54, 20 und Vell., 2, 97, 1 brachten die Abreise des Augustus in Verbindung mit der clades Lolliana, die aber wohl nicht der direkte Anlaß war. Vgl. dazu F. SCHÖN, *Der Beginn der römischen Herrschaft in Rätien*, Sigmaringen, 1986, S. 25-27 mit überzeugenden Argumenten.

25 Münzstätte Rom : *BMC Emp.* I 16, 86 - 17, 88, 17, 90; *RIC* 12 68, 351-353, 356. «Spanische» Münzstätten : *BMC Emp.* I 76, 437-442; *RIC* 12 50, 146-51, 153. - Vgl. W. TRILLMICH, a.O., S. 520 zu Nr. 355.

26 *BMC Emp.* I 60, 332, 71, 410-415; *RIC* 12 44, 41, 46, 58, 46, 60, 47, 80-84.

27 *BMC Emp.* I 77, 443 - 78, 449; *RIC* 12 52, 162-165. Vgl. zu dieser Prägung K. KRAFT, *Zur Münzprägung des Augustus*, (SB *Frankfurt*, Bd. 7), Frankfurt, 1968, Nr. 5, 235-240.

28 H. GABELMANN, *Antike Audienz- und Tribunalszenen*, Darmstadt, 1984, S. 120-121 zu Nr. 37.

29 F. PANVINI ROSATI, a.O., in *Arch. Class.*, 3, 1951, S. 73. Zur Datierung der Münzmeisterkollegien der Jahre 13 und 12 v. Chr. vgl. M. FULLERTON, *The Domus Augusti in Imperial Iconography*, in *AJA*, 89, 1985, S. 473-483.

30 Zur Analogie zwischen der Rückkehr aus dem Osten und aus dem Westen vgl. S. SETTIS, *Die Ara Pacis*, in *Kaiser Augustus und die verlorene Republik* (Ausst.-Kat. Berlin), Berlin, 1988, S. 419-420; M. TORELLI, *Typology and Structure in Roman Historical Reliefs*, University of Michigan Ann Arbor, 1982, S. 28-31.

31 *BMC Emp.* I 20, 101-2; *RIC* 12 72, 399. Vgl. M. FULLERTON, a.O. 476 m. Anm. 18.

32 *BMC Emp.* I 68, 390-69, 395; *RIC* 12 48, 107 - 49, 113.

33 *BMC Emp.* I 27, 127-130; *RIC* 12 74, 416.

die Erfolge des Princeps in Gallien bezogen³⁴. Auch die erneute Erwähnung der Ehrungen des Jahres 27 v. Chr. auf Münzen dieses Münzmeisters (Abb. 9)³⁵ zeigen die Parallelen zwischen den Prägungen, die die Verlängerung des Jahres 18 wie die des Jahres 13 v. Chr. begleiten. Daß die Münzprägung der Jahre 12 und 13 sich ansonsten jedoch bevorzugt mit der dynastischen Entwicklung des Prinzipats beschäftigte³⁶, macht deutlich, daß im Jahr 13 die Herrschaft des Augustus so gefestigt schien, daß der Aspekt der Rechtfertigung durch außenpolitische Erfolge in den Hintergrund zu treten begann.

Nachdem mit dem Tode des Agrippa 12 v. Chr. und dem des Drusus 9 v. Chr. zwei der erfolgreichsten Feldherren des Kaiserhauses nicht mehr zur Verfügung standen, änderte sich die Lage³⁷. Obwohl Augustus auch weiterhin durch die Erfolge auf dem Balkan und in Germanien die Übertragung der Provinzen rechtfertigen konnte, war eine Legitimation von größerer Bedeutung als zuvor. Nach 12 v. Chr. hatte die Edelmetallprägung der römischen Münzmeister ein Ende gefunden. Mit der Beschränkung dieser Münzprägung auf die Münzstätte Lugdunum begann gleichzeitig eine Verarmung der Typen. Um so auffälliger ist es daher, daß im Jahr 8 v. Chr., in dem die nächste Verlängerung des *imperium militiae* anstand, in Lugdunum wieder auf aktuelle außenpolitische Erfolge, die sich diesmal nur aus den von der Münzpropaganda bisher eher vernachlässigten Germanienkampagnen ergeben konnten³⁸, Bezug genommen wurde.

Eine Denarprägung aus diesem Jahr zeigt als Rückseitentypus den auf einer *sella curulis* sitzenden Augustus, dem ein Barbar in germanischer Tracht ein Kind als Geisel übergibt (Abb. 10)³⁹. Diese Darstellung mit der Geiselnahme sugambrischer Gesandtschaften⁴⁰ in Verbindung zu bringen, ist angesichts des tragischen Ausgangs der Ereignisse kaum für eine Reminiszenz in einer Münzemission angetan gewesen⁴¹. Die Geiselstellung sollte wohl vielmehr auf die *editio* der Germanen in der Kampagne des Jahres 8 v. Chr. hindeuten⁴², für die Augustus und Tiberius imperatorische Akklamationen entgegennahmen und für die Augustus sogar ein Triumph zuerkannt wurde⁴³.

In den Kontext der Verlängerung des Imperiums des Augustus läßt sich möglicherweise auch eine Sonderprägung der stadtrömischen Münzmeister stellen, die gewöhnlich mit dem Triumph des Tiberius in Verbindung gebracht und daher in das Jahr 7 v. Chr. datiert wird⁴⁴: die sog. «Triumphalasse» der Münzmeister P. Lurii

34 Vgl. M. FULLERTON, a.O., S. 477 Anm. 35; R.M. SCHNEIDER, a.O., S. 41 Anm. 185 mit weiterer Lit. R. WOLTERS, *Tam diu Germania vincitur - Römische Germanensiege und Germanensieg-Propaganda bis zum Ende des 1. Jhs. n. Chr.*, Bochum, 1989, S. 32 m. Anm. 100.

35 *BMC Emp.* I 26, 126; *RIC* I2 74, 419.

36 Vgl. dazu M. FULLERTON, a.O., S. 473-483.

37 D. KIENAST, *Lagom* a.O., S. 46.

38 R. WOLTERS, a.O., S. 31-35.

39 *BMC Emp.* I 84, 492 - 85, 495; *RIC* I2 55, 200-201.

40 Cass. Dio, 55, 6.

41 R. BRILLIANT, *Gesture and Rank in Roman Art*, New Haven, 1963, S. 76, der allerdings auch auf die nachteiligen Auswirkungen hinweist. H. GABELMANN, a.O., S. 121 zu Nr. 38; B. OVERBECK, *Rom und die Germanen*, Stuttgart, 1985, S. 34 zu Nr. 101. Vorsichtiger W. TRILLMICH, a.O., S. 523-524 zu Nr. 366 und R. WOLTERS, a.O., S. 33, die von einem Zusammenhang mit dem Umsiedlungsprogramm sprechen.

42 R. WOLTERS, a.O., S. 33; W.H. GROSS, *Ways and Roundabout Ways in the Propaganda of an Unpopular Ideology*, in R. WINKES, *The Age of Augustus*, Providence-Louvain-la-Neuve, 1986, S. 43.

43 Cass. Dio, 55, 6, 5 f.

44 H. MATTINGLY, *BMC Emp.* I, 1923, S. XCVIII; C.H.V. SUTHERLAND, *RIC* I2 75*. Dagegen datiert K. KRAFT, *Zur Datierung der römischen Münzmeisterprägung unter Augustus*, in *Mainzer Zeitschrift*, 46-47, 1951-1952, S. 31 diese Prägungen in die Jahre 3/2 v. Chr. Eine ausführliche

Agrippa, M. Maecilius Tullus und M. Salvius Otho (Abb. 11)⁴⁵. Es handelt sich dabei um Kupferdupondien⁴⁶ mit dem Bild des lorbeerbekränzten Augustus auf dem Avers, hinter ihm eine Victoria. Das plötzliche Auftauchen einer so pointiert auf die Virtus des Princeps anspielenden Prägung in der sonst so stereotypen Aesmotivik kann meines Erachtens nicht mit dem Triumph des Tiberius im Jahr 7 v. Chr. in Verbindung gebracht werden. Überzeugender scheint es, die Stücke in das Jahr 8 v. Chr. zu setzen, in dem sich der Princeps für eine erneute Verlängerung des militärischen Oberbefehls in einer eher schwierigen Situation legitimieren mußte.

In den folgenden Jahren ging das Interesse an der Münzprägung immer stärker zurück. Die wenigen neuen Bildtypen standen völlig im Zeichen der dynastischen Bemühungen des Augustus, die sich zu dieser Zeit ganz auf die Caesares konzentrierten⁴⁷. Als im Jahr 3 n. Chr. die nächste Prolongierung des Imperiums anstand, war ein Nachweis der militärischen Legitimation des Augustus offenbar kaum noch nötig⁴⁸. Seit Augustus 2 v. Chr. den Ehrentitel *pater patriae* erhalten hatte, war seine Herrschaft so gefestigt, daß vorrangig nur noch die Frage blieb, an wen die Herrschaft weitergegeben werden sollte.

Auch bei der letzten Verlängerung des *imperium militiae* 13 n. Chr. mußte die Stellung des Augustus nicht mehr eigens legitimiert werden⁴⁹. Bemerkenswert ist in diesem Zusammenhang vor allem, daß die Münzprägung von Lugdunum zu diesem Zeitpunkt auf die militärischen Erfolge des Thronfolgers abhebt. In dem Jahr, in dem Tiberius ein *imperium* für die Provinzen erhielt, das ihn Augustus gleichstellte⁵⁰, erscheint auf den Münzen das Bild seines pannonischen Triumphs aus dem Jahr 12 n. Chr. (Abb. 12)⁵¹. Auch im Falle des Tiberius findet sich also die Verbindung zwischen der Darstellung militärischer Erfolge in der Münzprägung und der Verlängerung bzw. Übergabe erweiterter militärischer Befugnisse.

Zusammenfassend ergibt sich, daß im Zusammenhang mit der Verlängerung des militärischen Imperiums auf den Münzen des Augustus Motive außenpolitischer Erfolge auftauchen. Dies trifft auch noch für eine Zeit zu, in der die Münztypen bereits weniger auf aktuelle Ereignisse Bezug nahmen und eher der Konsolidierung der Machtbasis des Augustus und der Frage der Nachfolgeregelung gewidmet waren. Je stärker jedoch die Selbstverständlichkeit wurde, mit der Oberbefehl des Augustus im Laufe der Jahrzehnte verlängert wurde, desto geringer wurde auch das Bedürfnis nach einer Legitimierung für dieses Ereignis in der Münzpropaganda.

Diskussion der Argumente Krafts wird in meiner noch unpublizierten Dissertation «Die Selbstdarstellung des Augustus in der Münzprägung und in den Res Gestae» (ungedr. Diss. Heidelberg 1991) vorgelegt werden.

45 BMC Emp. I 41 *. 42, 217 - 43, 219. RIC I 2 426. 429/30. 433/4.

46 Zur Benennung der Nominae vgl. C.H.V. SUTHERLAND, *Some Observations on the Coinage of Augustus*, in NAC, 7, 1978, S. 175 f. Ders., RIC I 2 75.

47 Zu den Caesares-Denaren vgl. Th. FISCHER, *Zur Münzprägung des Augustus für seine beiden Adoptivöhne Gaius und Lucius Cäsar*, in Lagom. Festschrift P. Berghaus, Münster, 1981, S. 35-36; D. KIENAST, *Augustus a.O.*, S. 323 m. Anm. 48 mit weiterer Lit. E. NUBER, *Der frühromische Münzumschlag in Köln*, in KölnJbVorFrühGesch, 14, 1974, S. 68-69.

48 D. KIENAST, *Lagom a.O.*, S. 46.

49 D. KIENAST, *Lagom a.O.*, S. 46.

50 Vell., 2, 121,1; Suet., *Tib.*, 21, 1. Vgl. dazu P.A. BRUNT, *C. Fabricius Tuscus and an Augustean Dilectus*, in ZPE, 13, 1974, S. 170-173; K. BRINGMANN, *Imperium proconsulare und Mitregentschaft im frühen Prinzipat*, in Chiron, 7, 1977, S. 236 mit Anm. 92; P. SCHRÖMBGES, *Tiberius und die res publica Romana*, Bonn, 1986, S. 57.

51 BMC Emp. I 87, 508-85, 512; RIC I 2 56, 221-224. Zum Triumph des Tiberius vgl. K. KRAFT, *Zur Münzprägung des Augustus*, SB Frankfurt, 1968, S. 248-249 m. Anm. 2; P. SCHRÖMBGES, a.O., S. 54-57.

Localisation d'un champ de bataille de l'an 9 ap. J.-C. en Germanie libre grâce à la numismatique

Frank BERGER*

1. Le lieu et l'histoire des découvertes

Un fameux symbole du nationalisme allemand est représenté par le «Hermannsdenkmal» (Monument d'Armand). Le visage du héros est tourné vers l'ouest, en direction du Rhin. Édifié en 1875, ce monument rappelle la bataille de la forêt de Teutobourg. Trois légions romaines y furent vaincues en l'an 9 ap. J.-C., lors d'une insurrection germanique. Publius Quinctilius Varus, le gouverneur de la province, se suicida pendant la bataille. Depuis ce temps-là, Arminius, le chef de la tribu germanique des Chérusques, est célébré en tant que libérateur de l'Allemagne.

Le lieu de ce tragique événement n'était pas connu jusqu'à présent. Les récits des auteurs antiques – Velleius Paterculus, Tacite et Dion Cassius – sont si imprécis que plus de 700 théories concernant l'emplacement du champ de bataille ont été élaborées depuis des siècles.

Le village de Kalkriese, situé en Basse-Saxe au Nord d'Osnabrück, entre un grand marais et les flancs du mont Wiehengebirge, est un endroit de Germanie libre d'où proviennent de nombreux témoignages de trouvailles de monnaies romaines. Depuis 1692, les historiens locaux rapportent que les paysans trouvent régulièrement des pièces de monnaie romaines dans leurs champs. Le grand savant Théodore Mommsen fit examiner ces trouvailles en 1884 et en conclut qu'il s'agissait bien là du champ de bataille de la forêt de Teutobourg. Mais aussitôt plusieurs objections s'opposèrent à sa théorie :

- Premièrement, les pièces de cuivre, c'est-à-dire la monnaie typique des soldats, y manquaient.
- Deuxièmement, les rapports indiquaient que certaines monnaies plus tardives avaient été importées de Rhénanie plus récemment.
- Troisièmement, tous les équipements militaires y manquaient.

Finalement, toutes les monnaies romaines de Kalkriese, qui avaient été déposées dans un château à Kalkriese même, disparurent en 1945 lors de la libération de l'Allemagne par les troupes anglaises.

En 1987, une nouvelle phase de découvertes commença à Kalkriese. Le capitaine Tony Clunn, archéologue amateur anglais, trouva grâce à son détecteur de métaux, un trésor de 160 deniers romains. Il mit également au jour quelques monnaies de cuivre et d'argent dispersées sur une surface de 1 à 2 km².

En conséquence, le docteur Wolfgang Schlüter, archéologue départemental, entreprit des fouilles systématiques mettant au jour les objets décrits ci-dessous.

2. Les objets d'armement militaire

Presque tous les objets découverts sont en métal, à savoir en cuivre ou en fer, à l'exception de quatre pions de jeu en verre et d'une poignée de lampe en terre cuite. Nous y trouvons des fibules du type «Aucissa» et «Omega», une dolabra, c'est-à-dire une hache militaire, des pointes de lances en fer, un instrument médical, des accessoires de cavalerie, des projectiles en plomb, des crochets de cuirasse ornés de chaînes portant des inscriptions, et le masque d'un casque pour couvrir le visage – masque porté par les *signiferi* ou porteurs d'étendard.

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Tous les corps d'armée sont donc représentés à Kalkriese, à savoir les fantassins, la cavalerie, l'artillerie légère, les pionniers jusqu'aux médecins militaires. Les archéologues datent ces objets d'armement militaire d'une époque située à peu près entre le règne d'Auguste et celui de Tibère.

3. Les pièces de monnaie

Les pièces de monnaie apparues lors des fouilles actuelles fournissent de nouvelles précisions sur la date et le lieu de la bataille.

En janvier 1991, nous disposions déjà de 15 *aurei*, de 49 pièces en argent, de 2 trésors contenant respectivement 162 et 179 deniers, de 105 pièces en cuivre et d'une tessère en plomb. Toutes ces pièces datent de l'époque de l'empereur Auguste ou d'une époque antérieure.

En ce qui concerne l'or, parmi les 15 *aurei* de la région de Kalkriese, le type «Caius et Lucius» – les petits-fils d'Auguste – est représenté 6 fois. Leur degré de conservation est superbe. La frappe de ce type de monnaie commença en l'an 2 av. J.-C., mais, la date de la fin de ce monnayage est inconnue : elle est supposée se situer dans les années 1, 4, 12 ou même 14 ap. J.-C. La carte (Berger, 1992, fig. 40) indique la répartition de ces *aurei* dans le Nord-Ouest de l'Allemagne.

En ce qui concerne l'argent, le premier graphique représente le trésor de deniers trouvé par le capitaine Clunn (Fig. 1). Les trois repères essentiels sont les suivants : la guerre civile entre Jules César et Pompée, les deniers des légions de Marc Antoine de 32 à 31 av. J.-C., et enfin le denier bien connu au type de Caius et Lucius, monnaie la plus récente représentée 34 fois dans le trésor (soit 21 % de l'ensemble) en parfait état de conservation.

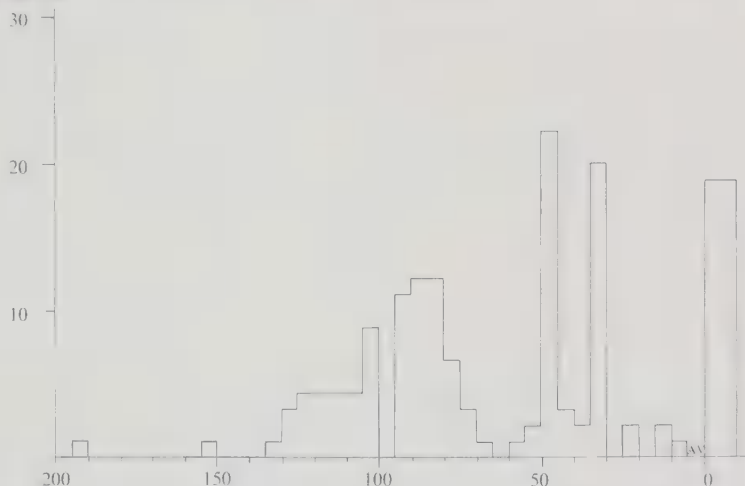


Fig. 1. Le trésor de deniers trouvé par le Capitaine Clunn (Barenaue-Lutterkrug).

Le deuxième graphique fut dessiné selon les indications de Théodore Mommsen et décrit le trésor dérobé au château de Kalkriese (Fig. 2). Il ne s'y trouve guère de différence par rapport au trésor évoqué précédemment (les trois carrés noirs correspondent aux trois deniers rapportés par hasard au Musée Kestner).

Le troisième graphique nous décrit un trésor de deniers trouvé dans le camp légionnaire de Haltern, au bord de la rivière Lippe (rive droite du Rhin, à 140 km de Kalkriese) (Fig. 3). Les Romains évacuèrent ce camp rapidement mais en bon ordre en l'an 9 ap. J.-C., après leur défaite dans la forêt de Teutobourg.

La similitude entre le trésor de Haltern et ceux de Kalkriese m'incite à conclure que ces trésors furent enterrés à la même époque, et sans doute aussi pour la même raison.

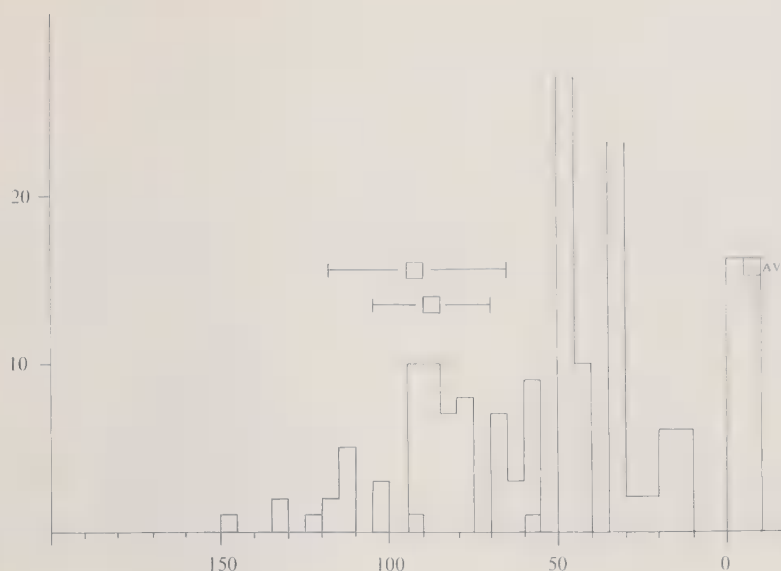


Fig. 2. Les deniers dérobés de Kalkriese, selon les indications de Th. Mommsen (FMRD, VII, 1016).

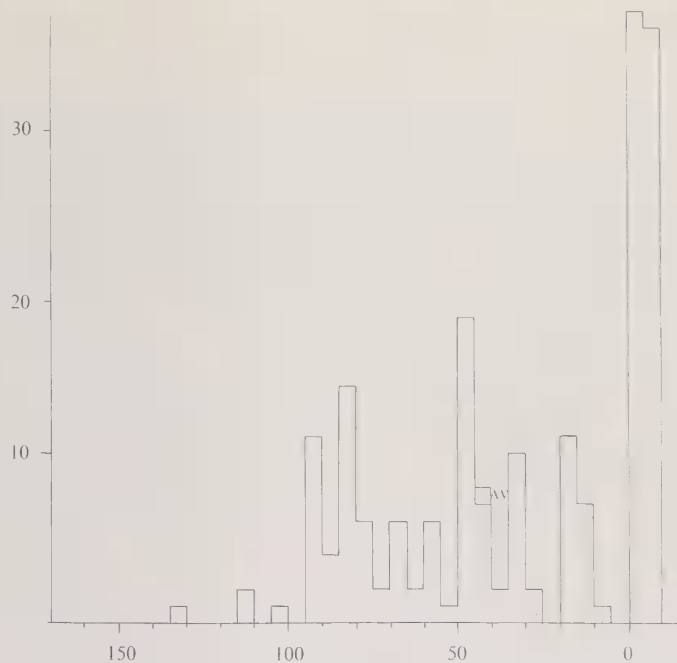


Fig. 3. Le trésor de Haltern (FMRD, VI, 4056).

En ce qui concerne le cuivre, nous trouvons à Kalkriese 98 asses de type Lugdunum I, 5 asses des monétaires de Rome et un demi-as de Nemausus. Selon Konrad Kraft et Jean-Baptiste Giard, les asses de Lugdunum I sont à dater des années 10 à 3 av. J.-C. 95% de ces asses portent une contremarque. Je ne connais aucun lieu militaire romain présentant un pourcentage aussi élevé de contremarques. À Kalkriese, les contremarques portent les lettres AVC (Auguste), IMP avec *lituus* (Empereur) et VAR (Varus). La date de cette dernière contremarque se situe entre 7 et 9 ap. J.-C., époque durant laquelle Varus était gouverneur de Germanie. D'après les monnaies de cuivre, la date d'enfouissement se situe donc vers les années 8-9 en retenant quelques mois pour le *coin-drift*. Le type Lugdunum II dont la frappe débute en l'an 10 ap. J.-C. n'est pas représenté à Kalkriese.

4. Conclusion

Aucune monnaie romaine trouvée à Kalkriese ne fut jamais frappée ni mise en circulation après l'an 9 de notre ère. Les types de monnaies dont la frappe débute, pour le cuivre en l'an 10 et pour l'argent en l'an 13, font défaut. Les objets découverts – équipements militaires, monnaies d'or, d'argent et de bronze – appartiennent tous à un même ensemble. Aucun camp militaire romain n'existe en ce lieu; par conséquent, tous ces objets furent certainement enfouis lors d'un conflit militaire. Rien ne contredit donc l'hypothèse selon laquelle on pourrait établir un rapport avec les batailles de l'an 9, encore appelées batailles de la forêt de Teutobourg. Peut-être s'agit-il ici du lieu-même du champ de bataille.

Depuis 400 ans, l'archéologie allemande cherche ce lieu historique. Il me semble maintenant que nous l'avons trouvé, grâce à la numismatique.

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The Temple of Concord on Tiberian Sestertii

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From July A.D. 34 until his death in March A.D. 37, Tiberius struck sestertii with an obverse type of a hexastyle temple with lateral extensions, generally identified as the temple of Concord (Fig. 1). Although O.L. Richmond proposed that it represents the temple of Divus Augustus¹, an examination of literary, archaeological and art historical materials confirms the conventional interpretation.



Fig. 1. Obverse Die #10 with 3 steps, tribunician date XXXIIX. ANS 1944.100.39298.

The earliest temple of Concord for which there is good archaeological evidence was built by L. Opimius in 121 B.C. at the NW end of the Forum Romanum, at the foot of the Capitoline hill, just below the later site of the Tabularium². During the principate of Augustus, it came to be closely associated with Tiberius, who in 7 B.C. vowed to restore it³, and in A.D. 10, the temple was dedicated in the names of both Tiberius and his brother Drusus as the Aedes Concordiae Augustae⁴. Under Tiberius the temple became virtually a museum, housing a collection of statues, paintings and other objects – one of which, a statue of Vesta, Tiberius is known to have selected himself on his way to Rhodes in 6 B.C.⁵

In view of this close association with Tiberius, the temple of Concord certainly would have been a logical choice as a type for one of his coins, and the abundance of statuary shown on the coin is consistent with its reputation as a kind of museum (Fig. 1). In particular, the two statues on podia flanking the steps in front of the temple – representing Mercury, on the left, and Hercules, on the right – appear to have been a well-known grouping. This is suggested by a votive relief from the Capitoline Museum, inv. 504 (Fig. 2), which can be dated to the mid-2nd century A.D.⁶ Behind the river god

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¹ O.L. RICHMOND, *The Temples of Divus Augustus and Apollo Palatinus Upon Roman Coins*, in *Essays and Studies Presented to William Ridgeway*, ed. E.C. QUIGGIN, Cambridge, 1913, p. 198-212.

² Appian, *B.C.*, 1.26; Plutarch, *C. Gracch.*, 17; Cicero, *pro Sest.*, 140; Augustine, *de Civ. Dei.* 3.25. Literary and archaeological evidence for an earlier temple to Concord built by Camillus in 367 B.C. is weak. A. MOMIGLIANO, *Camillus and Concord*, in *Classical Quarterly*, 36, 1942, p. 111-120, esp. 115-117; L. RICHARDSON, JR., *Concordia and Concordia Augusta: Rome and Pompeii*, in *Parola del Passato*, 33, 1978, p. 260-272, esp. 260-261; and B.M. LEVICK, *Concordia at Rome*, in *Scripta Nummaria Romana: Essays Presented to Humphrey Sutherland*, eds. R.A.G. CARSON & C.M. KRAAY, London, 1978, p. 217-233, esp. 218-220.

³ Cass. Dio, 55.8.2.

⁴ Cass. Dio, 56.25.1; *Fasti Praen.*, CIL 1.231; Ovid, *Fasti.* 1.639-48.

⁵ Tiberius compelled the Parians to sell him a statue of Hestia/Vesta (Cass. Dio, 55.9.6). Other statues in the temple: Pliny, *NH.* 34.73, 77, 80, 89, 90. Paintings: Pliny, *NH.* 35.66, 131, 144. Other objects: Pliny, *NH.* 36.196 and 37.3-4.

⁶ The inscription below the relief states that it was dedicated by a freedman of Marcus Aurelius Caesar, making the probable date between A.D. 139 and 161 (CIL 6.166).

reclining in the center, one can see the figures of Mercury, identified by his money-bag and caduceus, and Hercules, with his lion's skin and club. As on the temple coin (Fig. 1), Mercury stands with his left leg slightly bent and his right hand slightly outstretched, while Hercules thrusts out his left hip and holds his right hand in the gesture of crowning himself. The figures seem to be copied directly from the temple⁷.



Fig. 2. Marble relief dedicated to the Springs and Nymphs, A.D. 139-161. Ht. : 66 cm. Rome, Capitoline Museum 504. (Courtesy DAI, Rome, neg. no. 39.820).

The statuary shown on the top of the temple pediment has been the subject of a bewildering variety of views⁸, but the differences of opinion need not concern us here, as they do not bear on the identification of the temple. What does bear on that point, of course, is the coin's representation of the cult figure, visible in the doorway (Fig. 1), and here we find support for identifying the temple as that of Concord. A close examination of the statue reveals a seated goddess holding a patera in her right hand and a cornucopia in her left. These are both attributes of the goddess Concordia⁹.

Further support for identifying the temple on the coin as that of Concord is the plan of the temple as it appears on the coins, where the lateral extensions give it a «sideways» layout, with the porch located on one of the long sides of the cella (Fig. 1). Such a «sideways» layout was unusual¹⁰, but it correlates very well with the archaeological remains of the temple of Concord. Figure 4 shows what was left of the temple before it was partly covered by the Via del Foro Romano in 1882. At the base of the central tower, between the flight of stairs up the Capitoline hill and the columns of the temples of Saturn and of Vespasian, one can clearly see the left corner of the cella and the foundation of the porch. This photo may be compared with Figure 5, which shows a plan of the extant building. Again, the left corner of the cella and the foundation of the porch are clearly visible, as is the modern street).

⁷ C.C. VERMEULE, *Herakles Crowning Himself*, in *JHS*, 77, 1957, p. 283-299, esp. 285.

⁸ Cf. H. MATTINGLY, *BMCRE*, London, 1923, vol. 1, p. 137; D.F. BROWN, *Architectura Numismatica. Part I: The Temples of Rome*, diss. New York University, New York, 1941, p. 29; G. BECATTI, *Opera d'arte greca nella Roma di Tiberio*, in *ArchCl*, 25-26, 1973-1974, p. 18-53, esp. 36-38; Ph.V. HILL, *The Temple of Concordia on Sestertii of Tiberius*, in *NCirc*, 86, Feb. 1978, p. 66; and P. ZANKER, *The Power of Images in the Age of Augustus*, Ann Arbor, 1988, p. 111.

⁹ H. MATTINGLY, *op. cit.*, vol. 1, cxxxvii; D.F. BROWN, *op. cit.*, p. 28 and n. 46; and Ph. V. HILL, *op. cit.*, p. 66.

¹⁰ Two other temples with «sideways» plans were the temple of Castor near the Circus Flaminius and that of Vejovis, on the opposite side of the Tabularium from the temple of Concord (Vitruvius, 4.8.4).

The grounds for identifying the temple on the coin as that of Concord thus seem very strong. Perhaps the only cause for some reservation is the lack of an explanation why this type should have been issued in the period A.D. 34-37 when the temple of Concord was dedicated in A.D. 10. Indeed, it was just this point that prompted O.L. Richmond to dissent from the conventional view and to identify the temple as that of Divus Augustus, completed late in Tiberius' life and dedicated by Caligula¹¹. Although his opinion has found scant acceptance¹², other scholars have felt the need for an answer and have proposed several occasions that the coin might have been meant to commemorate, such as the 25th anniversary of the dedication of the restored temple in A.D. 10¹³ or Tiberius' vicennium, that is, the 20th anniversary of his becoming emperor¹⁴.

However, there is a simpler explanation offered by the numismatic evidence. Tiberius did not start minting *aes* until A.D. 22-23, when he quite appropriately struck issues honoring Augustus. Thereafter, no more *aes* was struck until A.D. 34-35, when the issues included the temple of Concord, a triumphal chariot, Augustus in an elephant quadriga, and a shield inscribed OB CIVES SER. These types appear to commemorate Tiberius himself as much as Augustus, so it seems only fitting that the temple most closely associated with Tiberius, that of Concord, would be chosen at this time. There is no need to explain why it was not chosen earlier: there was no suitable earlier occasion on which to choose it.

With the temple securely identified as that of Concord, I began a die study of these sestertii which has suggested an interesting evolution in the engravers' representational priorities. Fifty coins have been examined thus far, revealing 11 obverse dies used with 29 reverse dies. The reverses differed essentially only in the tribunician date. All had the letters SC in the center, encircled by the legend, which begins at 12 o'clock, TI CAESAR DIVI AVG F AVGVST PM TR POT XXXVI, XXXVII, or XXXIIX. Broken down by tribunician date, there were 11 coins from tribunician year 36, showing 2 obverse dies (#1-#2) and 5 reverses (dies #1-#5); 15 coins from tribunician year 37, showing 4 obverses (dies #2-#5) and 9 reverses (dies #6-#14); and 24 coins from tribunician year 38, showing 7 obverses (dies #5-#11) and 15 reverses (dies #15-#29). Figure 3 illustrates the die links.

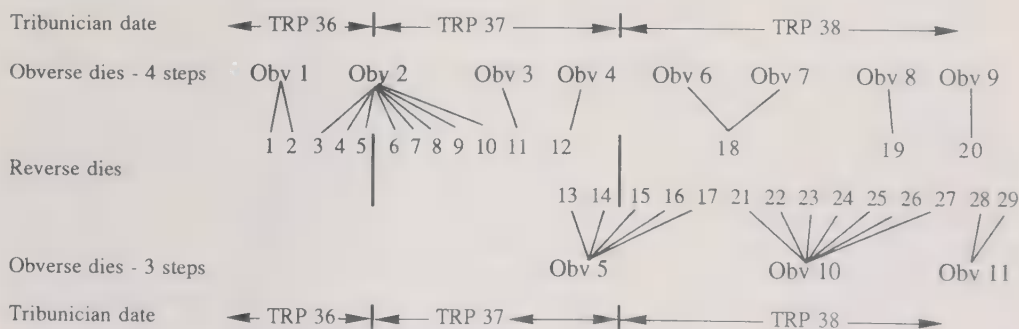


Fig. 3. Die link chart of Tiberian sestertii with the temple of Concord.

¹¹ O.L. RICHMOND, *op. cit.*, p. 199-203.

¹² See, for example, D.F. BROWN, *op. cit.*, p. 28, who rejects it. J.B. WARD-PERKINS, *Roman Imperial Architecture*, Harmondsworth, 1981, p. 46, does not automatically dismiss Richmond's identification of the temple. However, Richmond's location of it, in the northwest corner of the Palatine, was disproved by R. DELBRUECK, *Der Südostbau am Forum Romanum*, in *JdAI*, 36, 1921, p. 8-33.

¹³ B.M. LEVICK, *Tiberius the Politician*, London, 1976, p. 86.

¹⁴ ID., *Tiberius' Retirement to Rhodes in 6 B.C.*, in *Latomus*, 31, 1972, p. 779-813, esp. 803 n. 2; C. GASPARRI, *Aedes Concordiae Augustae*, Rome, 1979, p. 20.



Fig. 4. The remains of the temple of Concord before being partly covered by the Via del Foro Romano in 1882. (Courtesy Fototeca Unione at the American Academy in Rome, 3023).

After the coins were roughly arranged according to tribunician dates, a stylistic analysis was done to further refine their order. One aspect of the analysis involved measuring the width and height of each element of the temples. It became apparent that the proportions changed over time and that the stylistic groups could be arranged by the ratio of the width of the left wing to the width of the central porch. Figures 6-7 illustrate the two obverses used in tribunician year 36. Both are carefully cut, with wide windows and ample wings, and their average ratio of the width of the left wing to the width of the central porch is 1 : 2.23¹⁵. These obverses differed mainly in the spacing of the statues on the pediment, with #1 (Fig. 6) showing a gap between the central triad and the statue to the left of them, and #2 (Fig. 7) showing these four statues close together. Also different is the treatment of the entablature on the wings. On obverse #1 (Fig. 6), the lower two parallel lines are almost level with the top of the door, while #2 (Fig. 7) has them closer to the bottom edge of the architrave. In addition, the left wing on #2 angles up somewhat.

This second obverse die continued in use in tribunician year 37, when it was recut to slightly enlarge the cult statue. Figure 8 clearly shows the new tribunician year 37 – XXXVII – as well as the larger cult statue. This year also saw the introduction of a

¹⁵ Based on the admittedly scanty extant remains (Fig. 4), the temple's left wing actually measured about 11.5 m and the porch about 21.25 m, yielding a ratio of 1 : 1.85. This is sufficiently close to the ratio on the earliest coins to suggest that the die engravers who cut the initial dies sought to reflect the monument's directly observed proportions.

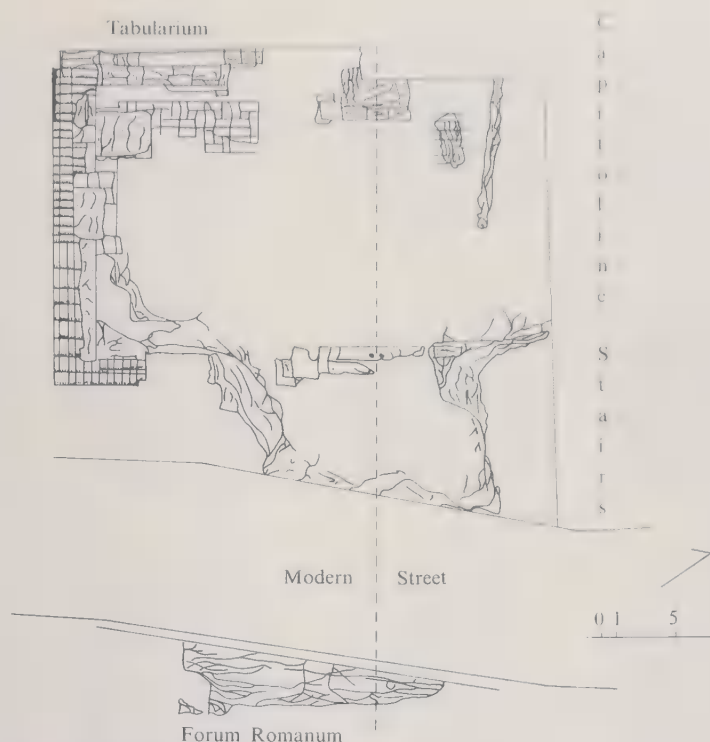


Fig. 5. Plan of the actual remains of the temple of Concordia. (After C. GASPARRI, *Aedes Concordiae Augustae, Rome, 1979, Tav. XXII*).

second stylistic group in which the temples have 3 steps instead of 4. In this 3-step group (Fig. 9), the windows become narrower, and the ratio of the width of the left wing to the width of the central porch averages $1 : 3.23$ – that is, the porch is wider at the expense of the wings. In contrast with Fig. 8, among the 4-step coins the ratio of left wing to porch is $1 : 2.53$ – only a modest change from the previous year. In both groups, the pedimental statues are mostly close together.

Obverse die #5 with the 3-step temple continued in use in tribunician year 38, illustrated on Fig. 10, where the year is clearly shown as XXXIIX. During this year, both the 3-step and 4-step groups become less and less carefully engraved, and both groups continue the trend of widening the porch and narrowing the wings. The 4-step group, however, apparently fell out of favor. Its production tapered off over the three years, with the dies being used with fewer and fewer reverses (Fig. 5). In addition, as on Fig. 11-12, the proportions of the 4-step dies became more like the 3-step group. The last 4-step dies, #6-#9, jump to an average ratio of $1 : 3.20$, almost exactly the ratio of the first 3-step die, which was $1 : 3.23$. Die #6 (Fig. 11), differs from the 3-step die (Fig. 10) mainly in the spacing between the pediment statues and in the size of the windows. It is also more crudely cut. The last 4-step die, #9 (Fig. 12), shows a much squatter temple with tiny windows, a taller pediment, and statues in front that look like atlantes, that is, they look as if the column capitals rest on their heads. By contrast, one can still see the columns behind the statues in die #6 (Fig. 11). Meanwhile in the last 3-step dies, #10-#11 (#11 illustrated on Fig. 13), the ratio of left wing to porch reaches $1 : 4.17$, giving these temples distinctively narrow wings. Moreover, except for their loftiness, these last 3-step temples exhibit the same tiny windows, taller pediments, and atlantid-like statues as the last 4-step dies.

Thus, the die study shows a clear development toward emphasizing the porch at the expense of the lateral extensions – a process more evident in the 3-step dies but discernible in the later 4-step dies as well, perhaps a result of imitation. At the same time, one can observe in both groups a general deterioration in the quality of the engraved



Fig. 6. Obverse Die #1 with 4 steps, tribunician date XXXVI. G. Hirsch, 10-12 Dec. 1957, 47; 7. Obverse Die #2 with 4 steps, tribunician date XXXVI. Baranowsky, FPL 1932, 389; 8. Obverse Die #2 with 4 steps, tribunician date XXXVII. Naville 17, 3 Oct. 1934, 1230; 9. Obverse Die #5 with 3 steps, tribunician date XXXVII. Glendining, Nov. 1950, 978 = Hall Coll., BMCRE, pl. 25.6 = Hirsch 18, 27 May 1907, 567; 10. Obverse Die #5 with 3 steps, tribunician date XXXIIX. Crippa, FPL July-Sep. 1972, 297; 11. Obverse Die #6 with 4 steps, tribunician date XXXIIX. R. Ratto 9, FPL 1933, 1436 = Hess 211, 9 May 1932, 299; 12. Obverse Die #9 with 4 steps, tribunician date XXXIIX. Paris, BN 120; 13. Obverse Die #11 with 3 steps, tribunician date XXXIIX. Paris, BN 119.

image. Plainly the engravers believed that constancy of proportion and clear rendering of detail were not essential, as long as the basic, identifying features of the monument – the hexastyle porch with abundant statuary and flanking wings – were retained.

Finally, as Figure 5 clearly shows, there is a complete absence of reverse die links between the 4-step and 3-step obverses, despite the fact that for some time both were being minted concurrently. One might be tempted to see in this isolation some evidence of separate workshops. Of course, it is too soon to draw conclusions – first, because my study does not purport to have examined all the extant obverse-reverse combinations, and second, because the question really calls for a comprehensive die study covering all four obverse types on the sestertii issued in these three years. If the temple coins are any indication, there is reason to think that in such a study patterns will emerge that shed interesting new light on the organization of the mint at this time.

Countermarks on the Aes of Claudius from Nijmegen

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Intermittently over the past twenty years, we have been studying the Roman coins in the Kam and Municipal collections of what is now the Provinciaal Museum G.M. Kam at Nijmegen in the Netherlands. Initially our interest layed in the rich series of countermarks on the coins in the collections; but during the past few years we have been preparing a more formal catalogue of the coin finds in the Museum collections to the end of the first century A.D. – and this study will be published as one of the Museum Catalogues early in 1992¹.

Nijmegen lies in the east of the Netherlands in the Province of Gelderland on the south bank of the River Waal, as the southern channel of the River Rhine is called in Holland. It was the site of the only legionary fortress in the Netherlands, which was occupied towards the end of the Augustan period and again from the time of the Batavian Revolt in A.D. 69/70 until the early years of Trajan. There were important civil settlements and canabae, notably the civil town of Noviomagus².

In the Nijmegen finds almost 80% of the sestertii and more than 50% of the dupondii of Claudius are countermarked; but whereas the two orichalcum denominations are extensively countermarked, there are no countermarks on the contemporary asses. Almost all the Aes coins of Claudius found at Nijmegen have an obverse legend with the Emperor's title ending in IMP (Imperator) i.e. omitting PP – his title of Pater Patriae «Father of his country». We know that Claudius adopted the title of PP in January A.D. 42, the second year of his reign. But because the title PP is first found on the dated gold and silver coinage of Claudius in A.D. 50/51 and of the heavy preponderance of Aes coinage without PP found in Gaul at La Mayenne, in Switzerland at Vindonissa, and at many sites in Germany and Britain, Kraay³ has argued that the issues of Claudian Aes without PP ran from A.D. 41 to A.D. 50, while the issues with PP ran from AD 50 until the end of his reign. His arguments have been widely accepted – eg. by Chantraine⁴ and Sutherland⁵, although not by von Kaenel⁶. But the position is much more complex than this. While Aes found in the western provinces, Germany, Gaul and Britain, consists almost entirely of issues without PP, Aes coins of both groups (with and without PP) are found in comparable numbers in many Italian finds and Aes coinage with PP is more predominant at some Danubian sites.

At Nijmegen whenever the end of the obverse legend on Claudian Aes coins is clear enough to be read, it has the ending IMP (ie. without PP). Moreover nine of the ten sestertii where the termination of the obverse legend is not clear have countermarks only known to occur on sestertii without PP, and there can be no doubt that these sestertii also

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** Provinciaal Museum G.M. Kam, Nijmegen.

1 D.W. MAC DOWALL, A V M. HUBRECHT and W. DE JONG, *Description of the Collections of the Provinciaal Museum G.M. Kam at Nijmegen. The Roman Coins. Republic to Nerva*, Nijmegen, 1992. The statistics of coin finds in this article are taken from the Catalogue.

2 W.J.H. WILLEMS, *Romeins Nijmegen*, Utrecht, 1990.

3 C.M. KRAAY, *Die Münzfunde von Vindonissa*, Basel, 1962, p. 36-38; ID., in *JRS*, 53, 1963, p. 177.

4 H. CHANTRAINE, *Die antiken Fundmünzen von Neuss, Gesamtkatalog der Ausgrabungen 1955-1978*, (Novaesium, 8. Limesforschungen, 20), Berlin, 1982.

5 C.H.V. SUTHERLAND, *The Roman Imperial Coinage*, I, revised edition, London, 1984, p. 114-120.

6 H.M. VON KAENEL, *Roma - Monete dal Tevere, l'Imperatore Claudio I*, in *BollNum.* 2-3, 1984, p. 108-110.

belong to the group without PP : and the three dupondii on which the end of the obverse legend cannot be read also have countermarks known only on dupondii without PP. Moreover the sestertii, dupondii and asses found at Nijmegen and in the western provinces are strikingly different from the normal issues of Claudius struck at the Mint of Rome in weight, style and fabric. They are the somewhat lighter products of an auxiliary mint supplying Nijmegen and other sites on the Lower Rhine and in Britain. The absence of PP from the obverse legends on the Aes coinage of this auxiliary mint has no chronological significance, although the presence or absence of PP may well have the chronological significance identified by Kraay for the Aes issues struck at Rome.

The sestertii found at Nijmegen usually have multiple countermarks carefully placed round the Emperor's head to avoid defacing it.

[PRO] is the countermark most commonly found. Like similar countermark PROB found on Claudian sestertii in Britain⁷ and at Rome⁸, it must mean «approved» in some way from Probatum or Probativ.

[MP] is clearly a monogram standing for Imperator. On sestertii and dupondii on which the full obverse legend can be read, the countermark occurs on sestertii with the legend ending in IMP (without PP). In general it is found on coins of the auxiliary mint which originally had an obverse legend ending in IMP. It seems to be clarifying the status of these coins – that they belong to the group struck to a slightly lower weight standard than the IMP PP sestertii and dupondii from the Mint of Rome.

[TI A] should stand for TI(berius) AV(gustus), the Roman emperor A.D. 14-37, who succeeded Augustus. In this form the countermark only occurs on sestertii of Claudius. A second form of [TI A] occurs extensively at Vindonissa and sites in Upper Germany on sestertii of Caligula and Claudius; and a third form of the countermark is found widely on copper asses – at Hofheim⁹ on 48 out of 61 (78%) of both orthodox and irregular asses of Agrippa. Kraay¹⁰ suggested that [TI A] may have served the purpose of restoring the obliterated name of Claudius; but the obvious interpretation of [TI A] is an abbreviation standing for Tiberius, not Claudius; and the legend TI CAESAR DIVI F AVGVS TVS was the regular form of titulature employed on the Aes of Tiberius. We therefore suggest that the coins countermarked [TI A] were being given the status of sestertii and dupondii of Tiberius struck at the Mint of Rome.

[BON] the least frequently used countermark of the group is found on more barbarous and unorthodox looking coins. It must mean something like Bonum i.e. good coin. The countermark clearly added some value to the coin, as countermarks with a mirror image N (N), local copies of the official countermark, are sometimes encountered.

This group of multiple countermarks clearly belongs to Lower Germany as Kraay has demonstrated. It is most interesting to note that these countermarks occur more commonly at Nijmegen than elsewhere. [PRO] occurs on 78% of the sestertii of Claudius and on 45% of the dupondii at Nijmegen (compared with 40% and 33% at Neuss) [MP] occurs on 56% of the sestertii of Claudius and 45% of the dupondii at Nijmegen (compared with 20% and 27% at Neuss); and [TI A] on 17% of the sestertii of Claudius at Nijmegen (compared with 5% at Neuss). Nijmegen seems to have been the principal centre in Lower Germany for the application of these countermarks.

⁷ R F. KENYON, *The Countermark PROB on Coins of Claudius I from Britain*, in *NC*, 148, 1988, p. 53-61.

⁸ H.M. VON KAENEL, *op. cit.*, p. 101-103.

⁹ E. RITTERLING, *Das Frühromische Lager bei Hofheim im Taunus*, in *Annalen des Vereins für nassauische Altertumskunde und Geschichtsforschung*, 41, 1912, p. 1ff.

¹⁰ C.M. KRAAY, *The Behaviour of Early Imperial Countermarks*, in R.A.G. CARSON and C.H.V. SUTHERLAND (ed.), *Essays in Roman Imperial Coinage presented to Harold Mattingly*, Oxford, 1956, p. 113-136.

In some cases we can establish the order in which countermarks of this group were applied. The rare denominational countermarks **DVP** (for Dupondius), found on worn low weight sestertii and **AS** found on worn low weight dupondii, were clearly designed to give the coins on which they were placed a new status and value. They seem to have been applied consistently later than **PRO** and **M**. **BON** is applied after **M** and **PRO** on a Nijmegen dupondius; but **TI A** is later than **BON** on a sestertius in Leiden.

In the excavations at Valkenberg between 1941 and 1950¹¹ three dupondii countermarked **PRO** and two sestertii countermarked **PRO** and **PRO**, **BON**, **M** were found in levels 1 to 3, below the burnt levels associated with the Batavian Revolt of A.D. 69/70. This is important evidence that gives a firm *terminus ante quem* for the beginning of the main process of reviewing the earlier Aes coinage. The denominational countermarks – **DVP**, **AS** and **QV** would then come later under the Flavians.

This interpretation of the enigmatic abbreviations of the countermarks applied to the Aes of Claudius suggests that the process of countermarking is here clarifying or changing the status of an existing coin just as much as any overstriking would do. In this case the countermarks seem to be giving the coins countermarked the status of a specific issue. No doubt the coin then enjoyed the same general status as all the other coins of that issue or denomination and was allowed to continue in circulation while they were allowed to continue, and was demonetised when they were demonetised. Moreover the fact that the two periods when we find a high density of countermarked coins among the finds from Nijmegen – when **CAE** was used on the asses of the Moneyers of Augustus and this group of countermarks was applied c. A.D. 69-70 on the orichalcum denominations of Claudius coincides with the two periods when Nijmegen was garrisoned by a Roman legion points clearly to Roman military involvement in some way in the countermarking process.



Fig. 1. Sestertius of Claudius. Obverse countermarked **PRO**, **M**, **TI A**, **BON**. Reverse uncertain. Kam Collection, 400, 24,4 g; 2. Sestertius of Claudius. Obverse countermarked **PRO**, **M**, **TI A**. Reverse : *Spes*. RIC I 64D, I 99. Kam Collection, 389, 21,6 g; 3. Sestertius of Claudius. Obverse countermarked **PRO**, **M**. Reverse : *Spes*. RIC I 64D; I 99. Kam Collection, 399, 25,7 g. (All from the Provinciaal Museum G.M. Kam, Nijmegen).

¹¹ J. GERRITSEN, *Romeinse Munten van Valkenburg Z.H.*, in A.E. VAN GIFFEN, *De Romeinse castella in den dorpsheuvel te Valkenburg aan den Rijn*, in *Jaarverslag van de Vereniging voor Terpenonderzoek*, 29-32, 1944-1948, p. 273-275; 33-37, 1948-1953, p. 166-179.

Die römisch-dakischen Kriege und die Numismatischen Entdeckungen

Virgil MIHAILESCU-BÎRLIBA*

Eines der wichtigsten Ereignisse der Altgeschichte Rumäniens ist die römische Eroberung, welche bekanntlicherweise durch harte Kämpfe, massive Zerstörungen und große Bevölkerungsverschiebungen innerhalb einer kurzen Zeitspanne errungen wurde. Die Forschung aber stellte einen Mangel an Münzmaterial in den dakischen Siedlungen vor der römischen Eroberung fest¹. Ausgehend von diesen Feststellungen kamen wir früher schon zu der Schlußfolgerung, daß die römisch-dakischen Kriege numismatisch nicht entsprechend widerspiegelt werden, so wie es, gemäß den Meinungen einiger Forscher, im Falle anderer Ereignisse von kleinerer Bedeutung festgestellt wurde. Deshalb versuchten wir auch zu beweisen, daß die römischen Münzen, sowohl aus den Siedlungen als auch aus den Schätzen, viel später nach dem Datum ihrer Prägung in den Norden der Donau gelangten². Diesmal, zurückkommend auf die gesamte Problematik, werden wir die gegenwärtig in unserem Besitz befindendlichen Informationen Revue passieren lassen und verfolgen, inwieweit die von uns aufgestellte Hypothese noch verteidigt werden kann.

Gegenwärtig kennen wir folgende Schätze aus Dakien, bestehend aus Prägungen von Domitian, Nerva oder Trajan : Poiana-Gorj (81 n. Chr.), Hațeg (80 n. Chr.), Costești (Domitian), Pasul Vulcan-Mărcușa (92-94 n. Chr.), Hunedoara (Nerva), Orăștie (zwei : einer abgeschlossen in den Jahren 93-94 und ein anderer im Jahre 98 n. Chr.), Grădiștea de Munte - «Sub Cununi» (98-101) und Dobîrca (96)³. Neben diesen Münzfunden, in direkter Beziehung zu den dakischen Kriegen, könnten auch die in der Dobrudscha oder im Nordosten Bulgariens gefundenen Schätze angeführt werden : einer, in nächster Nähe von Adamklissi (80 n. Chr.), ein anderer von Agighiol (88-89 n. Chr.), und ein weiterer von Tulcea (Domitian), alle aus der Dobrudscha⁴; in Bulgarien stammen ähnliche Funde von Nikjup (Nerva), Juzunlar-Prelez (Nerva) und Draganačiburgas (Nerva)⁵.

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¹ I. GLODARIU, *Relații comerciale ale Daciei cu lumea elenistică și romană (sec. II î.e.n. - I e.n.)*, Cluj, 1974, S. 96; M. BABEȘ, *Problèmes de la chronologie de la culture Gêto-Dace à la lumière des fouilles de Cîrlomănești*, in *Dacia*, N.S., 19, 1975, S. 125-139.

² V. MIHAILESCU-BÎRLIBA, *La monnaie romaine chez les Daces orientaux*, București, 1980, S. 72 ff.; ID., *Dacia rășăriteană în secolele VI-I î.e.n. Economie și monedă*, Iași, 1990, S. 105-106.

³ C.S. NICOLĂESCU-PLOPȘOR, *Le trésor dace de Poiana-Gorj*, in *Dacia*, 7-8, 1937-1940, S. 203-215; B. MITREA, *Penetrazione commerciale e circolazione monetaria nella Dacia prima della conquista*, in *Ephemeris Dacoromana. Annuario della Scuola romana di Roma*, 10, 1945, S. 105, n° 32; S. 106, n° 42, 44 und 45; S. BOLIN, *State and Currency in the Roman Empire to 300 A.D.*, Stockholm, 1958, Supplement, Tab. I-II, S. 336-339; J. WINKLER, *Despre activitatea numismatică a lui Michael Pap Szathmári (1737-1812)*, in *SCN*, 3, 1960, S. 433-446; ID., *Schatzfunde römischer Silbermünzen in Dakien bis zum Beginn der Dakerkriege*, in *JNG*, 17, 1967, S. 136, 147; E. CHIRILĂ und I. ALDEA, *Tezaurul monetar de la Dobîrca, sec. II î. e. n. - I e. n.*, in *AMusNapocensis*, 5, 1968, S. 429-432; I. GLODARIU, *op. cit.*, S. 282, 284, 287, 289, 296 und 297.

⁴ B. MITREA, *Découvertes monétaires en Roumanie - 1979*, in *Dacia*, N.S., 24, 1980, S. 374; R. OCHEȘEANU, *Un tezaur de denari din vremea Flavilor descoperit la Adamclisi*, in *Pontica*, 21-22, 1988-1989, S. 91-97; C. DECULESCU, *Un tezaur de denari romani din timpul împăratului Claudius I, descoperit în Dobrogea*, in *SCIVA*, 17, 1966, 3, S. 584-585.

⁵ B. GEROV, *Die Einfälle der Nordvölker in den Ostbalkanraum im Lichte der Münzschatzfunde I. Das II. und III. Jahrhundert (101-284 n.Chr.)*, in *ANRW*, II/6, 1977, S. 116, 148 ff. (n° 1-3); ID., *Beiträge zur Geschichte der römischen Provinzen Moesien und Thrakien. Gesammelte Aufsätze*, Amsterdam, 1980, S. 367, 399-400.

Die Kartierung der Entdeckungen hebt prägnant die Konzentrierung dieser Schätze in zwei unterschiedlichen Zonen hervor. Die erste wäre jene aus dem Zentrum des dakischen Staates, seines Widerstandskerns; die zweite befindet sich in Moesia Inferior, entlang einer Route, die entweder aus der Zeit der Kriege Domitians sein könnte oder, sicherer, aus der Zeit des ersten römisch-dakischen Krieges Trajans (Abb. 1).

Betrachten wir aber welche die Lage der Entdeckungen ist aus den dakischen Burgen und Siedlungen im allgemeinen. Hier ist die Liste der neuesten Münzen : in Costești, eine Bronzemünze von Trajan (103-111), welche man vor dem letzten römisch-dakischen Kriege datieren *könnte* oder nicht⁶; bei Grădiștea Muncelului, Prägungen des Trajan, aus den Jahren 101-102, worunter sich ein Exemplar ohne *Dacicus* in der Umschrift befindet⁷; bei Blidaru, eine Bronzemünze des Trajan, aus den Jahren 101-102⁸; bei Sălașuri, eine Prägung aus Nerva⁹; bei Căpîlna, desgleichen eine Nerva-Münze¹⁰; bei Cugir, Prägungen des Domitian¹¹; bei Ocnița, Münzen des Domitian¹² und bei Barboși, aus Nerva¹³.

Also, wie ersichtlich, gruppieren sich sowohl die Schätze als auch die Münzfunde aus den Siedlungen im Zentrumsgebiet des dakischen Staates, wenn wir bloß die Prägungen aus der Zeitspanne Domitian-Trajan in Betracht ziehen. Aber auch wenn wir unsere Untersuchung auf eine längere Zeitspanne ausstrecken, so werden wir sehen, daß die Dinge nicht viel anders erscheinen.

So zum Beispiel sind die mit Münzen von Nero bis einschließlich Titus abgeschlossenen Schätze folgende : Șapte Sate (Vespasian)¹⁴, Diaconi (71 n. Chr.)¹⁵, Poiana (Titus)¹⁶, Calanu Mic (Otho)¹⁷, Sf. Gheorghe (Vespasian)¹⁸ und Bujoru (Vespasian)¹⁹.

- 6 M. MACREA, *Monetele din cetatea dacă del a Costești*, in *Anuarul institutului de studii clasice*, II, 1933-1935 (1936), S. 148-157; C. DAICOVICIU, N. GOSTAR und H. DAICOVICIU, *Șantierul arheologic Grădiștea Muncelului-Costești (reg. Hunedoara, r. Orăștie)*, in *Materiale*, 6, 1959, S. 341; C. DAICOVICIU et al., *Șantierul arheologic Grădiștea Muncelului (r. Orăștie), reg. Hunedoara*, in *Materiale*, 7, 1961, S. 315.
- 7 C. DAICOVICIU et al., *Studiul trailui dacilor în Munții Orăștiei*, in *SCIVA*, 1, 1950, 1, S. 146; ID., *Studiul trailui dacilor în Munții Orăștiei Șantierul arheologic Grădiștea Muncelului*, in *SCIVA*, 2, 1951, 1, S. 122; ID., *Șantierul Grădiștea Muncelului. Studiul trailui dacilor în Munții Orăștiei*, in *SCIVA*, 3, 1952, S. 304, 306; ID., *Șantierul arheologic Grădiștea Muncelului-Blidaru*, in *Materiale*, 3, 1957, S. 261-262.
- 8 C. DAICOVICIU et al., *Șantierul arheologic Grădiștea Muncelului-Blidaru. Rezultatul săpăturilor din cazmpania anului 1954*, in *SCIVA*, 6, 1955, 1-2, S. 202.
- 9 Z. SZÉKELY, *Sondajele executate de Muzeul regional din Sf. Gheorghe*, in *Materiale*, 8, 1962, S. 338; ID., *Săpăturile efectuate de Muzeul din Sf. Gheorghe (1959-1966)*, in *Materiale*, 9, 1970, S. 298.
- 10 M. MACREA und I. BERCIU, *La citadelle dacique de Căpîlna*, in *Dacia*, N.S., 9, 1965, S. 226-227.
- 11 I. GLODARIU, *op. cit.*, S. 260.
- 12 D. BERCIU, *Buridava dacică*, 1, București, 1981, S. 130-135.
- 13 D. POPESCU, *Les fouilles archéologiques de 1964 en Roumanie*, in *Dacia*, N.S., 9, 1965, S. 480.
- 14 B. MITREA, *Penetrazione commerciale...*, *op. cit.*, S. 108, n° 58.
- 15 R. VULPE et al., *Șantierul Poiana*, in *SCIVA*, 3, 1952, S. 210; B. MITREA, *Descoperirile de monede romane din asezarea geto-dacă de la Poiana si importanta lor istorică*, in *SCIVA*, 8, 1957, 1-4, S. 171; J. WINKLER, *op. cit.*, S. 145.
- 16 R. VULPE et al., *Activitatea șantierului arheologic Poiana-Tecuci, 1950*, in *SCIVA*, 2, 1951, 1, S. 193; B. MITREA, *op. cit.*, in *SCIVA*, 8, 1957, 1-4, S. 166-177.
- 17 B. MITREA, *Penetrazione commerciale...*, *op. cit.*, S. 105, n° 38.
- 18 *Ibidem*, S. 108, n° 59.
- 19 G. POPILIAN, *Notă asupra tezaurului de la Bujoru, comuna Vîrvoru (jud. Dolj)*, in *SCN*, 6, 1975, S. 213-216; B. MITREA, *Descoperirile monetare în România (1974-1976)*, in *BSNR*, 70-74, 1976-1980 (1981), 124-128, S. 576-577.

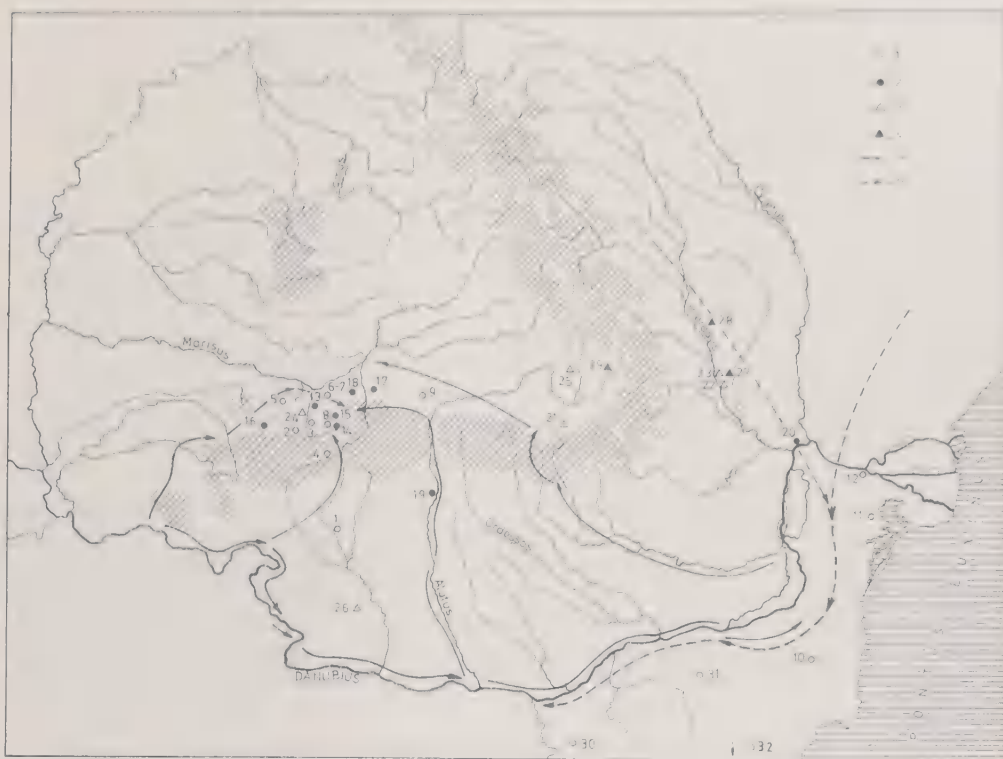


Abb. 1. Die Münzfunde aus Dakien in Beziehung mit der römischen Eroberung : 1. Schätze bestehend aus Prägungen von Domitian, Nerva und Trajan; 2. Siedlungen mit den neuesten Münzen von Domitian, Nerva und Trajan; 3. Schätze bestehend aus Emissionen aus dem Zeitalter des Nero bis Titus; 4. Siedlungen mit den neuesten Münzen aus dem Zeitalter des Nero bis Titus; 5. Römische Aufmarschrichtungen; 6. Dakische Angriffsmarschrichtung während des Winters der Jahre 101-102.

Funde wurden in folgenden Orten gemacht : 1, Poiana-Gorj; 2, Hăjeș; 3, 13, Costești; 4, Pasul Vulcan - Mărcușă; 5, Hunedoara; 6-7, Orăștie; 8, Grădiștea de Munte - «Sub Cununi»; 9, Dobîrca; 10, Adamclisi; 11, Agighiol; 12, Tulcea; 14, Grădiștea Muncelului; 15, Blidaru; 16, Sălașuri; 17, Căpîlna; 18, Cugir; 19, Ocnîța; 20, Bărboși; 21, Șapte Sate; 22, Diaconi; 23, 27, Poiana; 24, Călanu Mic; 25, Sf. Gheorghe; 26, Bujor; 28, Răcău; 29, Covasna - Cetatea Zinelor; 30, Nikjup; 31, Juzunlar - Prelez; 32, Drăgani.

Dazu auch die dakischen Siedlungen, deren letzte Münzfunde aus der gleichen Zeit stammen : Poiana (71 n. Chr.)²⁰, Răcău (Nero)²¹ und Covasna-Cetatea Zinelor (Vespasian)²².

Also auch in dem Falle, wo wir in unsere Überlegungen auch die Emissionen von Nero bis Titus einbeziehen, würde die Zahl der Entdeckungen nicht allzusehr steigen; es könnte nur bemerkt werden, daß diese im östlichen Teil Dakiens wachsen.

Welche Schlußfolgerungen können wir ziehen aus der Darstellung dieses skizzenhaften Bildes der in den dakischen Siedlungen gefundenen Münzen sowie der Schätze? So wie wir versucht haben auch anderweitig zu zeigen, vor und während der römisch-dakischen Kriege wurden ziemlich viele Schätze vergraben. Das Studium der Münzfunde zeigt uns jedoch, daß im I. Jahrhundert n. Chr. in Dakien weiterhin der republikanische römische Denar vorherrschte, neben welchem, in kleinerem Ausmaß,

20 R. VULPE, *La civilisation dace et ses problèmes à la lumière des dernières fouilles de Poiana, en Basse-Moldavie*, in *Dacia*, N.S., I, 1957, S. 143-164.

21 V. CĂPITANU und V. URSACHI, *Noi descoperiri de monede antice în județul Bacău*, in *Carpica*, 7, 1975, S. 50.

22 I. GLODARIU, *op. cit.*, S. 281.

auch der frühe kaiserliche (vor-neronische)²³ Denar präsent ist. Deswegen also ist die von Tacitus gelieferte Information über die Vorliebe der Germanen für den republikanischen römischen Denar²⁴ unserer Meinung nach in großem Maße auch für andere Völker des *Barbaricum* gültig, darunter auch für die Daker. Nur durch eine solche Deutung kann der scheinbar unversöhnliche Widerspruch zwischen den literarischen Daten und dem archäologischen Material erklärt werden, welches ein blühendes wirtschaftliches Leben und bedeutende Handelsaustausche mit der römischen Welt während des ganzen I. Jahrhunderts n. Chr. bezeugen; dies einerseits. Andererseits haben wir aber auch die Reduzierung des römischen Geldes aus jener Zeit in Dakien. Dieser scheinbare Widerspruch verschwindet, wenn man davon ausgeht, daß das numismatische Dokument, welches wahrhaftig das wirtschaftliche Aufblühen Dakiens im I. Jahrhundert bestätigt, der republikanische römische Denar ist und teilweise der frühe kaiserliche Denar. Deshalb muß Neros Reform als ein Bezugspunkt für das Studium des römischen Denars im I. Jahrhundert n. Chr. betrachtet werden, denn sie hat sowohl das Römische Reich als auch dessen Beziehungen mit der restlichen Welt beeinflußt. So kommt es, daß wir Tacitus' Behauptungen, obwohl sie sich direkt nur auf die Germanen beziehen, auch für andere Bevölkerungen gültig sind²⁵.

Deswegen können die Schätze aus Dakien, welche mit den Prägungen des Augustus oder des Tiberius enden oder auch mit einigen post-neronischen Exemplaren (insbesondere Münzen von Vespasian), mit den Folgen der Reform Neros in Verbindung gebracht werden, so daß das Eingrabungsdatum eines Schatzes nicht bestimmt werden kann ausgehend von der jüngsten Münze. Die Münzfunde in den Siedlungen bestätigen diesen Gesichtspunkt, wobei einerseits der Parallelismus zwischen diesen Schätzen festgestellt werden kann, und andererseits die Tatsache, daß einige Siedlungen aufgrund des archäologischen Materials viel später zu datieren sind als ihre letzten Münzen. Desgleichen führte die Fülle der Entdeckungen republikanisch-römischer Denars aus Dakien, zusammen mit anderen numismatisch-archäologischen Argumenten einige Forscher zur Behauptung der Hypothese, laut welcher vor allem zur Zeit Burebistas die dakische Münze/Währung identisch wird mit der römischen²⁶. Der Fund, im Jahre 1961, in der dakischen Burg bei Tilişca eines Lagers, das 14 Stanzen umfaßte, wovon 10 als zu Denarprägungen aus den Jahren 145/138 - 76/71 v. Chr. (Sydenham, 402 und 792) zugehörig identifiziert wurden, unterstützte noch mehr die Behauptung über die Existenz »der dakischen Münze von römisch-republikanischem Typ«²⁷. Eine unlängst gemachte Entdeckung jedoch hat die Daten zu diesem Problem total verändert. Anlässlich der Forschungen bei Sarmizegetusa Regia aus dem Jahre 1988 wurde eine dakische Werkstatt entdeckt, wo drei Stanzen, ähnlich mit denen aus Tilişca, zum Vorschein kamen. Diese wurden wie folgt identifiziert:

1. *C. Cassius* (RRC, 266, 126 v. Chr.);
2. *C. Hosidius C.f. Geta* (RRC, 407, 68 v. Chr.);
3. *Tiberius* (TI. CAESAR DIVI AVG F AVGVSTVS, RIC, I, S. 93 und ff., 14-37 n. Chr.).

Die dakische Werkstatt befand sich unter zwei römischen Schichten, bestehend aus einer römischen metallurgischen Werkstatt überlagert von der römischen Befestigungsmauer, welche hier nach 106 n. Chr. erbaut wurde. Folglich kamen die Autoren der Forschungen zu der Schlußfolgerung, daß die dakische Werkstatt mit den Stanzen vor dem letzten dakisch-römischen Krieg datiert werden kann, wahrscheinlich zwischen 102-105; so daß man annimmt, daß sich hier eine königliche Münzstätte befand, welche heimlich republikanisch-römische und frühe kaiserliche Denare kopierte, mit dem Zweck sehr schnell die von Dezebals Verbündeten geforderten Summen zu zahlen, vor und während der letzten großen Konfrontation mit Rom. So kann

23 V. MIHAILESCU-BÎRLIBA, *La monnaie romaine...*, op. cit., S. 72 ff.; ID., *Dacia răzăriteană...*, op. cit., S. 72-75.

24 Tacitus, *De origine et situ Germanorum*, V, 3 (Bucureşti, 1963, S. 18).

25 B. MITREA, *Penetrazione commerciale...*, op. cit., S. 123 ff.

26 M. MACREA, *Monetele din cetatea dacă de la Costeşti*, in *Anuarul institutului de studii clasice*, 2, 1933-1935 (1936), S. 162 ff.

27 N. LUPU, *Die Münze in der dakischen Burg von Tilişca*, in *ForschVolksLand*, 7, 1, 1964, S. 8-14.

angenommen werden, daß es gegenwärtig keine andere Beweise gibt, um zu behaupten, daß zu Burebistas Zeit die Daker den Denar kopierten; desgleichen kann in unserem Falle die römisch-republikanische Währung nicht mehr nützlich sein zur Datierung archäologischer Ensembles, wenigstens als *terminus post quem* nicht²⁸.

Infolgedessen kann die Vergrabung der römischen Denarschätze aus der Zeitspanne Augustus-Vespasian sowie auch, selbstverständlich, derjenigen aus der folgenden Zeit kleine Konflikte oder die dakisch-römischen Kriege zum Grund haben, ohne daß eine präzise Unterscheidung vorgenommen wird zwischen den Münzdaten *terminus post quem*²⁹. Andererseits zeigt die geographische Lage der Entdeckungen, sowohl in den Siedlungen, als auch der Schätze, den Norden Olteniens, den Nordwesten des Banats, die Brooser Berge, das Zentrum und den Süden Siebenbürgens an als Regionen, wo Kämpfe stattgefunden haben, was seinerseits vollauf den anderen Daten entspricht (den literarischen, archäologischen, epigraphischen, bildhauerischen, etc.), dies aber, was unterstrichen werden soll, nur auf die Kriege zwischen 101-102 und 105-106 bezogen. Gleichzeitig zeichnet sich eine andere Konfliktzone ab, die in den Osten Dakiens placiert werden kann. Auch das Territorium der Dobrudscha scheint seinerseits numismatisch seine Einbeziehung in den Konflikt zu bestätigen. Die Münzfunde aus Moesia Inferior scheinen den Weg der Angreifer aus dem Winter 101-102 zu markieren. Wahrscheinlich zogen diese durch das Donaudelta und wandten sich dann nach Süden, wobei sie bis in den Westen der Provinz gelangten, wie die auf dieser hypothetischen Route gefundenen Schätze anzeigen (siehe die Karte)³⁰. Die Identifizierung der Eroberungswege aber, so wie A. Blanchet vor mehr als 90 Jahren schon zeigte, ist nur im Falle des Reichsterritoriums aus der Zusammenlegung der numismatischen Informationen mit den historischen, archäologischen, epigraphischen und anderer Natur veridisch abzuleiten³¹.

Gleichzeitig ist es unsere Pflicht auch einen anderen Aspekt der Münzfunde aufzuzeigen. Es geht um die Umlaufgeschwindigkeit des Geldes in der erwähnten Zeitspanne und in der genannten Region. Wenn diese Tatsache im Falle des Fehlens eines realen Münzumschlags nicht eingeschätzt werden kann, so ist dem anders was die Lage im Imperium betrifft. Die vorliegende Analyse zeigt, daß es, gemäß den Enddaten der Schatzfunde in Moesia Inferior – ungefähr zwischen 80 und 98 – einen Zeitunterschied von 4-22 Jahren gibt, wenn wir die in den Jahren 101-102 n. Chr. stattgefundenen Eingrabungen in Betracht ziehen. Bis jetzt kennen wir keinen mit den Ereignissen von 101-102 zeitgenössischen Fund. Also, auch wenn wir davon ausgehen, daß die Silbermünze eine kleinere Umlaufgeschwindigkeit hatte, so war ihr Bewegungsrhythmus ein langsamer auch im Römischen Reich.

Gleichzeitig können wir nicht schließen ohne auch auf einen anderen Aspekt aufmerksam zu machen, der äußerst wichtig ist für die Geschichte Dakiens. Wie bekannt, ist die Eingrabung der Schätze eng verbunden mit einem Alarmzustand, der vor und während internen und externen Konflikten eintrat. Die Tatsache, daß solche Münzfunde bis in unsere Tage erhalten blieben, lässt vermuten, daß die Besitzer diese aus verschiedenen Gründen (Tod, Gefangenschaft, Zwangsvertreibung, Flucht usw.) nicht wieder an sich bringen konnten. Die häufigen Schatzvergrabungen während dem ganzen

28 I. GLODARIU, Eug. IAROSLAVSCHI, A. RUSU, H.G. SEIWERT und A. SION, *Cercetările arheologice și lucrările de conservare și restaurare de la Sarmizegetusa Regia, jud. Hunedoara (die Mitteilung - A XXIIa Sesiune anuală de rapoarte privind rezultatele cercetărilor arheologice din anul 1987, Pitești, 25-26 martie 1988)*; I. GLODARIU, A. RUSU und Eug. IAROSLAVSCHI, *Atelierul monetar de la Sarmizegetusa și implicațiile lui de ordin arheologic și istoric (die Mitteilung - Al Vlea Simpozion național de numismatică, Deva, 20 mai 1988)*; V. MIHAILESCU-BÎRLIBA, *Dacia rășăriteană...*, op. cit., S. 98.

29 ID., *La monnaie romaine...*, op. cit., S. 73-75.

30 K. STROBEL, *Untersuchungen zu den Dakerkriegen Trajans. Studien zur Geschichte des mittleren und unteren Donauraumes in der Hohen Kaiserzeit (Antiquitas, Reihe 1 : Abhandlungen zur alten Geschichte, 33)*, Bonn, 1984, S. 178 ff.

31 A. BLANCHET, *Les trésors de monnaies romaines et les invasions germaniques en Gaule*, Paris, 1900, S. 52-68, 100-101.

1. Jahrhundert n. Chr., wie auch die späteren, aus der Zeit der dakischen Provinz, beweisen, daß dergleichen Ereignisse ziemlich zahlreich waren. Deswegen kann der festgestellte Hiatus bei diesen Vergrabungen gerade aus der Zeit der dakisch-römischen Kriege auch dadurch erklärt werden, daß die Besitzer die Möglichkeit hatten, ihre persönlichen Reichtümer wieder an sich zu nehmen nach dem Ende der Konfliktzustände.

Money and Coinage in the Reign of Trajan

Reinhard WOLTERS*

In the discussion on the monetary policy of the Roman principate the coinage of Trajan takes a special position because of its many breaks¹: one has to think only of the inflow of the Dacian gold and silver booty (Lyd. Mag., II, 28), of the withdrawal of coins (Dio, 68, 15, 3), of the debasement of the denarius as well as the reduction in weight of the aureus. As additional problems there may be mentioned the coinage of Restitutions, and also the need for money in order to finance the Parthian war².

The explanations of these events by modern scholars, which are partly contradicting themselves, do mostly result from a special image of the Roman economy, focusing on the question of a fixed relation of gold to silver in the Roman coin system – or the need for adjusting the relation between gold and silver coins – and on the problem of the relation of nominal value to metal value. These questions of an understanding of «the economy», of the economic events in antiquity and of the availability of control mechanisms are an essential part of the so-called secular debate on economic primitivism of the ancient economy³. In the course of this debate numismatics, as far as its own contributions and the addition of results achieved with its own particular methods are concerned, has played only a very subordinate part, although without doubt there could be gained important insights into the character of the ancient economy especially from this side.

The reign of Trajan is especially suited for such a study: Firstly, it may be expected that the analysis of crises enables us to get some clues for a reconstruction of the regular monetary supply and finance policy. Secondly, a study of the monetary policy of Trajan will be an important link between existing studies on the coinage of the Julio-Claudian period, of Domitian and of Marcus Aurelius, Lucius Verus and Commodus⁴,

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¹ These are the first results of a project titled *Money and Coinage in the Reign of Trajan* which has been supported by a Post-doc-scholarship of the «Deutsche Forschungsgemeinschaft». A publication in a bigger context is planned, therefore only the most necessary literature will be mentioned here. I would like to thank Andrea Reikat, M.A. and Dr. Manfred Buschmeier for their help in translating this text into English.

² Cf. F. HEICHELHEIM, *Zu Pap. Bad. 37. Ein Beitrag zur römischen Geldgeschichte unter Traian*, in *Klio*, 25, 1932, p. 124-131; G. MICKWITZ, *Geld und Wirtschaft im römischen Reich*, Helsingfors, 1932, esp. p. 20, 28; J. GUEY, *De «L'or des Daces» (1924) au livre de Sture Bolin (1958). Guerre et Or. Or et Monnaie*, in *Mélanges d'archéologie, d'épigraphie et d'histoire offerts à J. Carcopino*, Paris, 1966, p. 445-475; A.H.M. JONES, *Inflation under the Roman Empire*, in JONES, *The Roman Economy*, Oxford, 1974, p. 187-227, 191; D.R. WALKER, *The Metrology of the Roman Silver Coinage, Part II. From Nerva to Commodus*, London, 1977, p. 4ff.; K. HASLER, *Studien zu Wesen und Wert des Geldes in der römischen Kaiserzeit von Augustus bis Severus Alexander*, Bochum, 1980, p. 104ff.; E. LO CASCIO, *State and Coinage in the Late Republic and Early Empire*, in *JRS*, 71, 1981, p. 76-86, 80ff.; F. DE MARTINO, *Wirtschaftsgeschichte des alten Rom*, München, 1985, p. 382ff.; E. CHRISTIANSEN, *The Roman Coins of Alexandria. Quantitative Studies: Nero, Trajan, Septimius Severus*, Aarhus, 1988, I, p. 247ff.

³ Cf. H.W. PEARSON, *The Secular Debate on Economic Primitivism*, in H.W. PEARSON, K. POLANYI, C.M. ARENSBERG (Ed.), *Trade and Market in the Early Empires*, New York-London, 1957, p. 3-11; H. SCHNEIDER (Ed.), *Sozial- und Wirtschaftsgeschichte der römischen Kaiserzeit*, Darmstadt, 1981, p. 1-28 (Introduction).

⁴ W. SZAIVERT, *Die Münzprägung der Kaiser Tiberius und Caius (Caligula) 14/41 (= Moneta Imperii Romani, 2/3)*, Wien, 1984; H.-M. VON KAENEL, *Münzprägung und Münzbildnis des Claudius*, Berlin, 1986; W. SZAIVERT, *Die Münzprägung des Claudius I.*, in *LNV*, 3, 1987, p. 59-75; D.W. MACDOWALL, *The Western Coinage of Nero*, New York, 1979; I. CARRADICE, *Coinage and Finances in the Reign of Domitian (A.D. 81 - 96)*, Oxford, 1983; E. SZAIVERT, *Die*

and thus it will become possible to gain a more complete picture of the Roman monetary policy during the first two centuries A.D.⁵.

The differences in judgements on the monetary economy during the time of Trajan made so far do in part result from the lack of a reliable chronological order of the coins – despite the important studies by Paul Strack and Philipp Hill⁶. Therefore it is most important to reconstruct the system of coinage from the existing coins, because only by bringing the coins into precisely datable emissions they will become a truly useful source. A special difficulty originates from the fact that on most of the coins of Trajan only very few datable hints can be found which could facilitate a chronological classification.

In a first step the coins of Trajan may be divided into three big groups : Those of COS II – to COS III (i.e. the years 98-102); those of COS V of the years 103-111, and those of COS VI of the years 112-117. While the second group with its nine years consists of only five obverse legends (and two of these with only a very short period of coinage stand at the beginning, and the one at the end of this period has a designation for COS VI - so that there remain only two others for a period of eight years!) and the third group consists of only five legends for six years, the first period of only five years shows thirteen mostly datable obverse legends. I would like to take these as examples to show some characteristics of the organisation of coinage in the time of Trajan, and to point out the differences between some groups of coins regarding the obverse and reverse legends and the reverse types.

The first two years of the government of Trajan start with an abundance of different obverse legends. Leaving aside the coins with a designation to COS III and assuming that there are no significant overlappings between the coins of the second and those that announce the third consulate, there remain four obverse legends for the time of January 98 A.D. up to October 99 A.D.⁷ :

Obverse legends COS II :

- (A) IMP CAES NERVA TRAIAN AVG GERM (PM)
- (B) IMP NERVA CAES TRAIAN AVG GERM PM
- (C) IMP CAES NERVA TRAIAN AVG GERM PM
- (D) IMP CAES NERVA TRAIAN AVG GERM

Considering the corresponding reverse legends one comes to the conclusion that the coins with the legend A differ from those with the legend B-D insofar as they never show the title of honour P(ATER) P(ATRIAE). Thus the coins with the legend A are in most cases put at the beginning of the coinage. Legend D remains a standard through the third and fourth consulates, so that it can be put at the end of this row. Legends B and C are mostly believed to be struck at the same time – IMP NERVA CAES is usually thought to be only a somewhat arbitrary change of IMP CAES NERVA that can be explained by an

Münzprägung des Kaisers Nerva in Rom. Ein Beitrag zur Systemanalyse, Diss. Wien, 1978; W. SZAIVERT, *Die Münzprägung der Kaiser Marcus Aurelius, Lucius Verus und Commodus 161/192 (MIR, 18)*, Wien, 1986. See also for the third century M. ALRAM, *Die Münzprägung des Kaisers Maximinus I. Thrax 235/138 (MIR, 27)*, Wien, 1989.

⁵ In this context I want to call attention to a project that runs simultaneously to this study at the Department for Numismatics of the University of Vienna and that deals with the registration of the ancient data concerning money, prices and wages. The first part dealing with the Roman economic data of the principate (Latin authors) is already finished, the compilation of the data from the Greek authors and of the data from the Roman Republic is in preparation.

⁶ P.L. STRACK, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts*, Teil I. *Die Reichsprägung zur Zeit Trajans*, Stuttgart, 1931; P.V. HILL, *The Dating and Arrangement of the Undated Coins of Rome A.D. 98-148*, London, 1970; ID., *The Bronze Coinage of 103-111*, in *NC*, s. 7, 10, 1970, p. 57-70.

⁷ The legend «PM» is put in brackets, because the title P(ONTIFEX) M(AXIMVS) can be found in the bronze coins, but lacks in the precious metals.

erroneous assumption of the title of Nerva (IMP NERVA CAES AVG GERM PM)⁸ used up to that point. However, Paul Strack's suggestion to put legend B at the beginning of the coinage of Trajan has never been accepted⁹.

A detailed look at the combination of obverse and reverse legends shows that those with legend B and those with legend C split up into two distinct groups¹⁰:

Obv. : IMP NERVA CAES TRAIAN AVG GERM PM

Rv. : - TRP COS II PP

- TRP COS II/SC

Obv. : IMP CAES NERVA TRAIAN AVG GERM PM

Rv. : - TRP COS II PP

- TRPOT COS II PP/SC

The fact, that for the bronze coins the reverse legend TRP COS II PP only appears in combination with IMP NERVA CAES and the legend TRPOT COS II PP only with IMP CAES NERVA, makes it clear that there were two consciously marked distinct groups of coinage in existence that came one after another. As the non-precious and precious metals together make up distinct series, i.e. they are linked by common reverse types, these groups can be found in the bronze coins. But if it is clear that the legend IMP NERVA CAES is not a result of an occasional exchange or of a mistake made occasionally, it becomes almost impossible to explain any change to it – namely from the legend A without «PP» to legend B – and to explain any subsequent return to the old title (legend C) in some reasonable way.

Only within these two groups the designation P(ONTIFEX) M(AXIMVS) always can be seen in the obverse legend. As regards the cases of the other two groups of COS II and of those of COS III and COS IIII, the title PONTIFEX MAXIMVS appears only with the bronze coins on the obverse, the precious metals show it on the reverse.

The stated groups and the obverses that may show a certain development offer sufficient hints to enable us to reconstruct the succession of these early coins of Trajan. At the beginning we will put those coins with the obverse legend which is most similar to the title of Nerva and whose obverse legend corresponds to those of the last two emissions of Nerva (IMP NERVA CAES AVG GERM PM TRP II)¹¹, i.e. the coins with the above-called legend B. This group comes nearest to that which turns IMP NERVA CAES into IMP CAES NERVA and which keeps the descriptive title P(ONTIFEX) M(AXIMVS) on the obverse in all metals. The remaining two obverses of COS II clearly hint at the legends of COS III and COS IIII, for which the shortening of PONT MAX to PM on the reverse can be seen as a criterion of order which is supported by the developments of the portrait and of the weight of the coins¹². The following order results from this:

(1) Obv. : IMP NERVA CAES TRAIAN AVG GERM PM

Rv. : - TRP COS II PP

- TRP COS II PP/SC

8 H. MATTINGLY, *Catalogue of the Roman Coins in the British Museum*, Vol III. *Nerva to Hadrian*, London, 1936, p. xxiv; lvii; lxix; A.S. ROBERTSON, *Roman Imperial Coins in the Hunter Coin Cabinet*, Vol. II. *Trajan to Commodus*, London, 1971, p. xxxv; 2ff.; G.G. BELLONI, *Le Monete di Traiano*, Milano, 1973, p. xvi; 1f.

9 P.L. STRACK, *Reichsprägung*, I, p. 20ff.; cf. H. MATTINGLY, *BMC* III, p. lvii; like Strack E. SZAIVERT, *Nerva*, p. 68.

10 Not included are some single pieces that belong to the first two groups and will be discussed when the complete study will be presented (cf. note 1). Also because of the lack of space no hint on the material are given here.

11 E. SZAIVERT, *Nerva*, passim (emission 5 and 6).

12 See below.

- (2) Obv. : IMP CAES NERVA TRAIAN AVG GERM PM
 Rv. : - TRP COS II PP
 - TRPOT COS II PP/SC
- (3) Obv. : IMP CAES NERVA TRAIAN AVG GERM (PM)
 Rv. : - PONT MAX TRPOT COS II
 - TRPOT COS II/SC
- (4) Obv. : IMP CAES NERVA TRAIAN AVG GERM
 Rv. : - PM TRP COS II PP
- (5) Obv. : IMP CAES NERVA TRAIAN AVG GERM (PM)
 Rv. : - PM TRP COS III PP
 - TRPOT COS III PP/SC
- (6) Obv. : IMP CAES NERVA TRAIAN AVG GERM (PM)
 Rv. : - PM TRP COS IIII PP
 - TRPOT COS IIII PP/SC

The fourth group only consists of precious metals, except for one coin that must be considered as a coin for a special purpose¹³; but the group fits into the scheme mentioned. The title Pontifex Maximus, which in case of the gold and silver coins changes into the reverse during the transition from the second to the third group, is first written more elaborately, then it heads the reverse legend shortened to PM. A look at the combinations of obverse and reverse legends in the main groups of COS III and COS IIII – except for the legends with the designation to the respective consulates – reveals how combinations of obverse and reverse legends do continue in a relatively schematic way.

However, in this seemingly harmonious picture the beginning of the coinage, i.e. the first three groups, strikes us as unusual. The changing of IMP NERVA CAES into IMP CAES NERVA can be easily explained by the beginning of coin production at a time when the new emperor was still absent. As soon as the title he preferred became known in Rome it was taken over on the new coins. Therefore it is surprising that the production of coins was not continued with a simple change of the obverses, but that there was established a new group that clearly differed in its combination of obverse and reverse from the old one. But this group still bore the title P(ATER) P(ATRIAE) on the obverse that does not exist in the third group but surfaces again in the fourth and all following groups. Perhaps this observation can be seen as being in accordance with an information from the panegyricus of Pliny the Younger on Trajan from 1 September 100, who in his 21st chapter mentions the repeated refusal of the princeps to take over the title Pater Patriae : *At tu etiam patris patriae recusabas. Quam longa nobis cum modestia tua pugna, quam tarde vicimus.* Pliny continues : *Nomen illud, quod alii primo statim principatus die ut imperatoris et Caesaris receperunt, tu usque eo distulisti, donec tu quoque, beneficiorum tuorum parcissimus aestimator, iam te mereri fatereris* (21, 1f.).

It was almost a tradition for the Roman emperors to refuse the title of honour Pater Patriae at first which was here also followed by Trajan – in sharp contrast to his immediate predecessor Nerva. The appearance of this title already on the first coins obviously did not fit into the image of a moderate new emperor that Trajan wished to represent. It is all the more surprising that with the changing of the first to the second group of coinage this was not being eliminated. There can only be speculations as to the reasons for this; they can perhaps be found in a lack of organisation or in the lines of communication between the capital and the emperor who was on the Rhine at that time. Be it as it may, this new group with its once again incorrect obverse legend was closed and followed by a third, clearly differentiated one. Trajan could already be addressed by Pliny as Pater Patriae when he refused to take over the consulate for the year 99. From this it can be concluded that Trajan bore this title at last since the late autumn of 98. The

¹³ Cf. BMC 380f. (Trajan).

first three groups can therefore be dated to the period until approximately October 98, the fourth group, with the addition of «PP», into the period from October 98 until October 99. Perhaps it is even possible to go one step further : In the military diploma *CIL XVI* 42 of 20 February 98 A.D. the title of Trajan is mentioned without *Pater Patriae*. In case of this fact being a hint of Trajan's refusal to bear this title, this would constitute a *terminus ante quem* for the first two groups. The «search» for a new title may then be dated to the period from 28 January to 20 February 98, i.e. it would have taken less than one month. This short span of time would help to explain the twofold, somewhat hectic break-up of the coin production and the only very limited number of coins in these groups. The third group, which gives an impression of greater homogeneity and is definitely more numerous, could then be dated to the period from the end of February until October 98 A.D., and it is certainly the first emission being made systematically. This homogeneity can also be found in the fourth group, which can be considered as an emission of the years 98/99 (autumn 98 up to autumn 99), and it is being repeated in the structural features of the emission of the third consulate of January to October 100.

At the end of this presentation I would like to conclude with some observations on the types of the reverses : number and distribution of the reverses in the particular groups suggest a structure of six officines. A certain linking to denominations of some types is striking : so the *Abundantia* is only represented on *denarii* or *dupondii*, *Fortuna* and *Roma* do only appear on *aurei*, *Vesta* and *Concordia* only on *denarii* and *denarii* and *sestertii* respectively. Inherent to this linking of reverse types to denominations is a certain tendency to form pairs with *Roma* on *aurei* and *Vesta* on *denarii* always appearing together, as well as *Fortuna* on *aurei* and *Concordia* on *denarii* and *sestertii*. The pairs were most possibly struck in one officine.

Concerning the portrait during the first years of Trajan's reign an increasing withdrawal from Nerva-like features is to be seen, but from the first group onward there are always certain extremes, i.e. portraits with a great resemblance to Nerva as well as some that come very close to the later pictures of Trajan. For this reason the portraits are not suitable as a criterion for a chronological order; first of all they show the work of different die cutters.

The most common bust is the one with a laureate head turned to the left and a radiated head on the *dupondius* respectively. A slight drapery on the left shoulder and the aegis can already be found in the first group – although rarely – and becomes somewhat more frequent later on. From *COS III* onwards the bust also appears with *paludamentum* from the front and *paludamentum* with *cuirass* from the back. These new forms become a little more frequent in the sixth group of coinage. The different forms of busts are represented almost indiscriminately and in fluctuating numbers for the different coins; criteria of order can not be gained from them. This observation can be best explained by the assumption, that the dies for the obverses were kept together in one place during breaks – for instance at night – and then distributed again without any prearranged order¹⁴. Die links show that the dies for the obverses were not attributed to certain officines.

The *denarii* for the whole period of time mentioned so far are relatively constant in weight, with an average of 3.2 g. According to Walker's investigations the contents of silver also does not show any significant fluctuations (93 % silver)¹⁵. The *aurei* offer a different picture : the already known reduction in weight during the first years of Trajan's reign can now be seen in detail in the reconstructed chronology¹⁶ :

14 Cf. R. GÖBL, *Die Rekonstruktion antiker Prägesysteme und ihre Bedeutung für die historische Forschung*, in *ANRW*, II 1, 1974, p. 890-918, 899.

15 D.R. WALKER, *Metrology*, II, p. 4ff.: 55ff.

16 H. MATTINGLY, *BMC III*, p. lvii.

| Group | Date | Coins | Weight | Ø |
|-------|----------------|-------|-----------|------|
| (3) | Febr.98-Okt.98 | 10 | 7,05-7,7 | 7,49 |
| (4) | Okt.98-Okt.99 | 20 | 6,91-7,73 | 7,24 |
| (5) | Jan.-Okt.100 | 15 | 7,01-7,43 | 7,18 |
| (6) | 101(?) | 21 | 6,6 -7,46 | 7,16 |
| (6a) | 102(?) | 8 | 6,06-7,33 | 6,97 |

A gradual reduction in gold can be deducted from this – not a reform which realized this measure in one step.

Prisonniers et trophées dans le monnayage des premiers Sévères

Thierry VERMEEREN*

En dix-huit années de règne, L. Septimius Severus en a passé près de la moitié sur les champs de bataille. C'est au rythme des guerres et des épisodes sanglants que se scande la majeure partie de son règne. De Carnuntum à Issos, de Ctésiphon à York, ce sont autant de campagnes qui ont embrasé l'Empire du levant au ponant. Porté au pouvoir par la force des armes, c'est par le même moyen que ce provincial obscur que rien ne semblait destiner à une carrière hors du commun va s'y maintenir tout au long de son règne. Par ses conquêtes, par ses victoires, cet arriviste sans scrupule va secouer l'Empire de la profonde torpeur dans laquelle les règnes désastreux de ses prédécesseurs l'avaient jeté.

La propagande impériale, que se soit sous sa forme littéraire ou numismatique est considérablement influencée par ces événements tragiques. En effet, tout au long du règne, elle encense les valeurs héroïques et triomphalistes telles que *Victoria*, *Concordia*, *Fides Militum*, *Virtus*¹, ... C'est par le biais du message monétaire que nous allons suivre le cheminement de la propagande sévérienne, au cours des trois épisodes militaires les plus significatifs (guerre civile, guerres parthiques, campagne de Bretagne). Nous allons analyser les composantes philologiques et iconographiques, et suivre leur évolution au fil des titulatures. Ces données seront également traitées par atelier et par métal.

Ce n'est toutefois pas l'angle de la victoire, thème abondamment illustré par l'historiographie moderne, qui a retenu notre attention, mais tout au contraire, celui de la défaite, des prisonniers et des trophées. D'une grande importance, tout au long de l'Antiquité, ces concepts de tout premier plan sont aujourd'hui victimes de notre morale judéo-chrétienne, ce qui explique le désintérêt des scientifiques modernes à leur égard, alors qu'ils constituent un des fondements de la propagande impérialiste romaine.

La limitation de notre échantillon tombe donc sous le sens. C'est l'iconographie des prisonniers et des trophées, qu'ils en soient le thème principal ou secondaire, qui sert de base de sélection à cette étude. Les bornes chronologiques vont de l'épisode de Carnuntum en avril 193 à la mort de Septime Sévère à York en 211, avec Septime Sévère, Empereur, Caracalla successivement César puis Auguste et Geta, César. Il est important de souligner que malgré son attaché nette à l'armée, Julia Domna n'est pas représentée dans cette série. Les ateliers pris en compte sont les ateliers sévériens traditionnels (Alexandrie, Émèse, Laodicée, Rome).

Tenant compte de l'ensemble de ces paramètres, nous avons dénombré quelque 198 types, répartis comme suit :

| Empereur | Type |
|----------------|------|
| Septime Sévère | 99 |
| Caracalla | 78 |
| Geta | 21 |

Cette période, que nous connaissons de façon approfondie grâce aux multiples sources qui s'y rapportent, se divise en trois épisodes majeurs :

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¹ Nous avons développé ces thèmes dans notre mémoire de licence (inédit), Th. VERMEEREN, *Monnaies et rémunérations militaires à l'époque de Septime Sévère*, Louvain-la-Neuve, 1988.

La guerre civile

Dès la prise de pouvoir de Carnuntum en avril 193, Septime Sévère s'est trouvé opposé à des compétiteurs puissants. Après avoir prestement éliminé Didius Julianus (juin 193), il lui fallut deux années de lutte acharnée pour venir à bout de son homologue syrien, Pescennius Niger (Issos, 195). Quant à Clodius Albinus, son allié d'hier, ce n'est qu'au prix d'une trahison magistrale qu'il s'en débarrassa (Lyon, 197). Cette période de guerre civile se termina par une courte campagne en Orient contre les populations alliées des sécessionnistes (Arabes et Adiabènes).

La guerre d'Orient

Suite à l'affaiblissement interne de l'Empire, les Parthes, toujours à l'affût d'un signe de faiblesse, franchissent les frontières et mettent le siège devant la ville romaine de Nisibis. En réaction à cette situation, Sévère se lança dans une campagne de grande envergure qui le mena à la prise et au pillage de la capitale parthe (Ctésiphon) en 198. Ce triomphe magistral fut célébré en grande pompe lors du retour de l'empereur à Rome, en 202.

La campagne de Bretagne

Cet ultime épisode militaire qui clôture le règne et la vie de Septime Sévère ne tient pas d'une nécessité stratégique. En effet, les sources écrites mentionnent très peu cet épisode qui semble avoir été gonflé artificiellement pour des besoins de politique interne. L'empereur, vieux et malade, qui ne semblait plus aspirer à la dure vie des camps, nous est encore présenté comme un guerrier infatigable, réalité qui nous semble aujourd'hui plutôt sujette à caution².

Si la répartition par atelier s'en tient au schéma sévérien traditionnel et, par là-même, n'attire aucun commentaire particulier, il n'en va pas de même de la répartition chronologique. En effet, comme nous le montrent les figures 1 et 2, il est possible de mettre en évidence trois pics nets qui correspondent aux trois épisodes majeurs précités. De plus, il apparaît nettement sur la figure 3 que les ateliers orientaux de Laodicée et d'Émèse offrent une part prépondérante aux thèmes qui les concernent directement (les guerres contre Pescennius Niger et contre les Parthes).

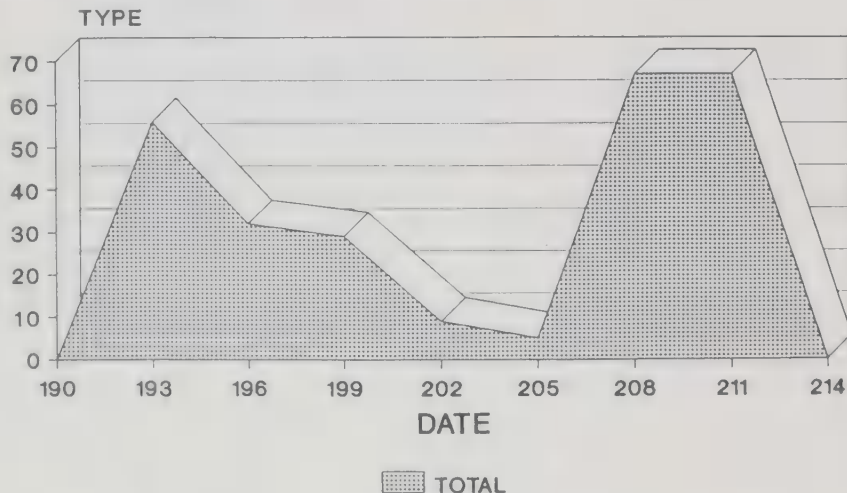


Fig. 1. Répartition chronologique.

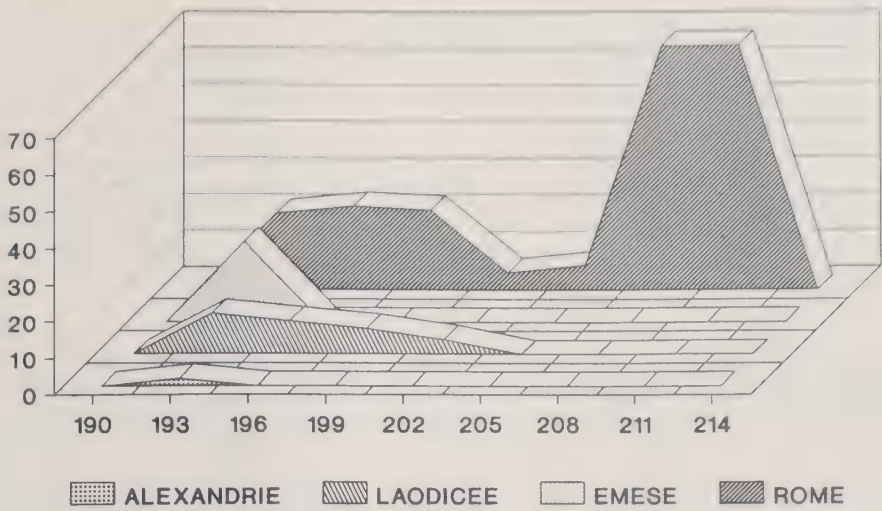


Fig. 2. Répartition chronologique.

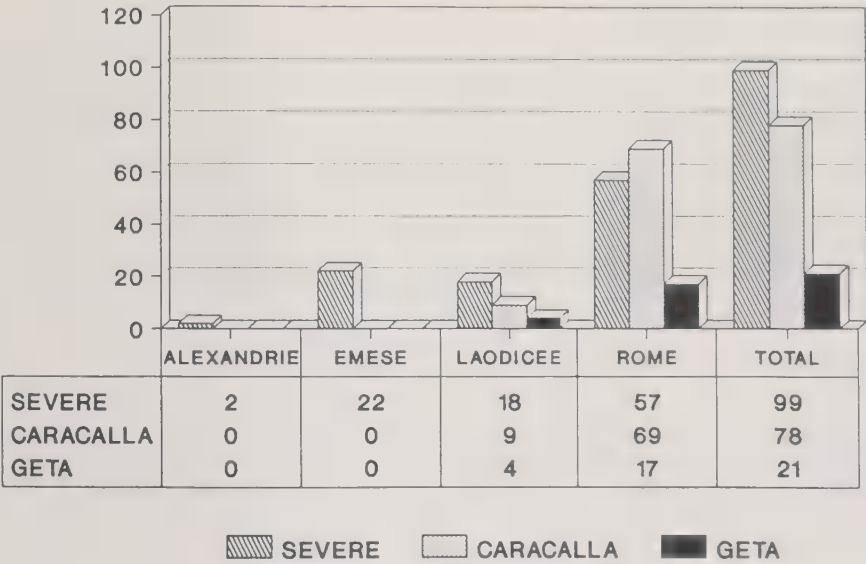


Fig. 3. Répartition par atelier.

Enfin, la présence massive de types faisant référence à la campagne de Bretagne nous apparaît comme une tentative évidente de propagande impérialiste visant à gonfler un épisode militaire secondaire pour des raisons de politique interne et dans le but de faire rejaillir sur la dynastie en place un prestige important bien que peu justifié (l'événement est créé par l'image qu'on en donne dans le monnayage).

En résumé, on peut dire que la propagande monétaire suit à la fois les réalités historiques et géographiques et que dans certains cas, elle utilise son prestige passé pour attribuer à des faits secondaires une importance sans commune mesure avec la réalité.

La répartition métallique qui suit également le schéma sévérien traditionnel se répartit comme suit (Fig. 4) :

| | |
|--------|----|
| Métal | % |
| Or | 17 |
| Argent | 46 |
| Bronze | 37 |

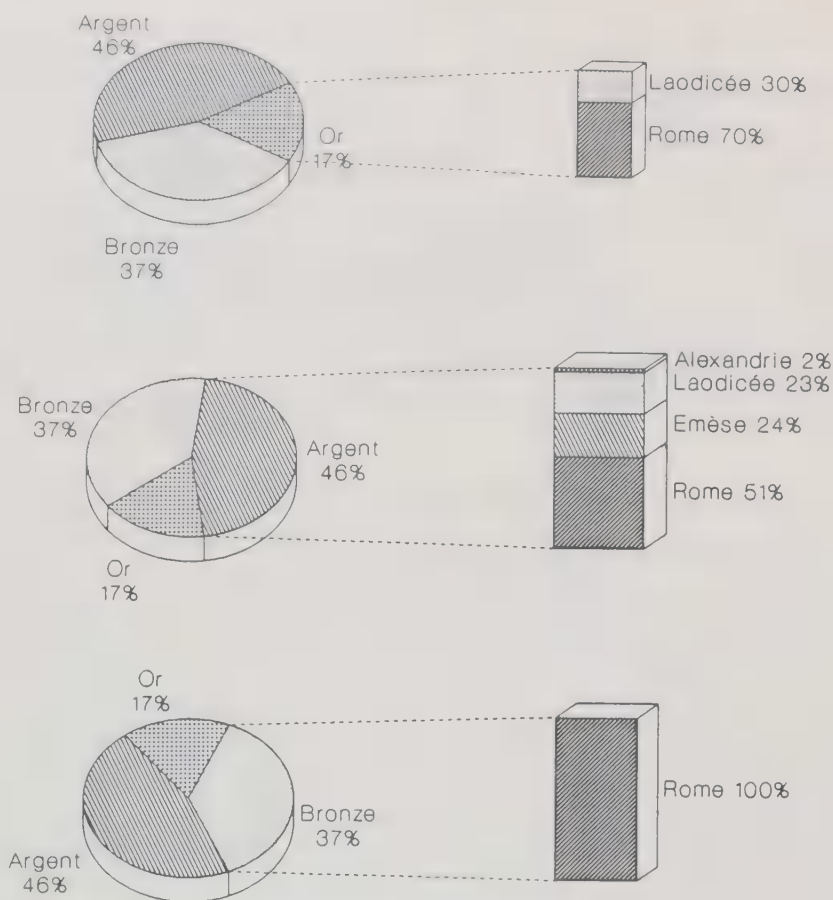


Fig. 4. Répartition des métaux.

Il est intéressant de souligner qu'en ce qui concerne le monnayage d'or, Caracalla est plus représenté que son père, et en ce qui concerne celui d'argent, c'est l'inverse qui se produit, bien que Caracalla soit à nouveau plus représenté à l'atelier de Rome. Le monnayage de bronze, frappé dans des proportions habituelles, reprend quant à lui la thématique des métaux plus nobles.

Mais venons-en à l'interprétation des *légendes* et de l'*iconographie*. En ce qui concerne les légendes, voyons tout d'abord comment elles se répartissent en fonction du prince figuré au droit.

Septime Sévère

L'empereur se voit conférer tout au long de la période les *cognomina ex virtute* consécutifs aux victoires remportées à l'occasion des trois conflits majeurs (ARAB ADIAB, PARTHICVS MAXIMVS, VICTORIAE BRITANNICAE). À cet égard, il est intéressant de souligner qu'au cours de la guerre civile, on n'insiste que sur le titre obtenu à la suite de la victoire remportée sur les alliés étrangers des sécessionnistes. À l'inverse, le type INV IMP TROPAEA, copié sur une émission de Pescennius Niger, est une référence indiscutable à une victoire obtenue au détriment d'un compétiteur, **ce qui signifie une victoire romaine sur des citoyens romains**. Ce cas unique dans l'histoire de la numismatique impériale, qui n'est documenté que pour les ateliers orientaux, les plus concernés par ces moments tragiques, représente un élément historique de tout première importance. En ce qui concerne la félonie qui a débouté Clodius Albinus, il n'en n'est fait nulle part mention, nécessité politique oblige. La référence à la dynastie précédente, matérialisée dans les monnaies par l'adoption posthume de Septime Sévère par Marc-Aurèle, et qui est l'un des thèmes favorisés de la propagande sévérienne, est également

présente par le biais du type DIVI M PII. Enfin, la référence religieuse, qui a presque perdu toute signification, est présente sous la forme de MARS PATER/ VICTOR.

Caracalla

À l'instar de son père, Caracalla reçoit également les *cognomina ex virtute* en rapport avec les campagnes auxquelles il a participé (PM / VICT BRIT). À côté de ces épisodes militaires de première importance, le jeune Auguste se voit conférer les titres princiers qui lui sont dus (PRINC IVVENTVTIS, IVVENTA IMPERII). Enfin, la référence religieuse obligée, tant à la fonction (PONTIF), qu'à la religion elle-même (MARS VLTOR, PROPVGNATOR et MINER VICT³) complète ce tableau.

Geta

Le fils cadet de l'empereur, bien qu'ayant une présence limitée dans ce monnayage du fait de son âge et de son arrivée plus tardive dans les affaires impériales, reçoit cependant une partie des honneurs consécutifs à la campagne de Bretagne (VICT BRIT). Ce *cognomen* s'accompagne également des références à ses titres princiers ainsi qu'à sa fonction religieuse (PONTIF). En ce qui concerne les divinités, c'est à nouveau Mars et Minerve qui sont à l'honneur, avec l'attribut de la victoire.

C'est un véritable programme de la propagande sévérienne qui vient de défiler sous nos yeux. Alliant l'empereur et ses deux fils, l'avenir de la dynastie, ce programme nous a présenté les réalisations de la politique interne et externe, l'attachement dynastique, les fonctions princières et les références religieuses; le tout sur mode guerrier et triomphaliste. Il a même insisté sur une victoire obtenue au détriment d'un compétiteur oriental réputé, tout en laissant aux oubliettes de l'histoire le cas plus tangent d'Albinus...

En ce qui concerne l'iconographie, la situation n'est pas très différente. En effet, comme nous le montre la figure 5, ce sont à nouveau les types guerriers qui sont les plus représentés. Deux groupes se détachent largement des autres : il s'agit tout d'abord de l'allégorie de la victoire et du dieu Mars, qui sont suivis de près par un groupe composé de la représentation de trophées et de Caracalla (qu'il soit figuré avec son père, avec son frère Geta ou bien seul). Ce symbolisme **héroïque, religieux et dynastique** complète de façon remarquable les thèmes présentés par les légendes, tout en soulignant à nouveau l'avenir de la dynastie que représentent Caracalla et Geta.

Toutefois un autre aspect a retenu notre attention, celui du décor secondaire. Les détails concernant les **vêtements, les armes et la composition des trophées** suivent une évolution au cours des dix-huit années de règne. Ils peuvent être répartis en trois groupes différents :

1. Groupe Historique. Cette première tendance qui apparaît au début du règne se marque par un réalisme et un souci du détail omniprésents. Le décor secondaire est directement lié à la représentation des populations vaincues clairement reconnaissables à des détails vestimentaires, et à leurs armes.

2. Groupe stéréotypé. Cette seconde tendance, difficilement datable, correspond à une érosion nette du détail dans les décors secondaires. En effet, il n'est plus possible d'identifier les vaincus grâce à des détails qui leur sont propres. Cette tendance se marque à un point tel qu'il n'est plus possible d'identifier les scènes, ni même l'époque. De fait, les trophées rappellent plus les campagnes de Trajan contre les Daces que celles de Septime Sévère contre les Parthes. Le réalisme a donc entièrement disparu et la préoccupation majeure semble plutôt concerner des productions de série sans caractère personnel.

3

L'épithète VICT n'est pas couramment accolée au nom de la déesse Minerve, bien que ce soit sans contester une divinité guerrière. Il semble ici que l'intention première était d'insister à nouveau sur le thème de la victoire.

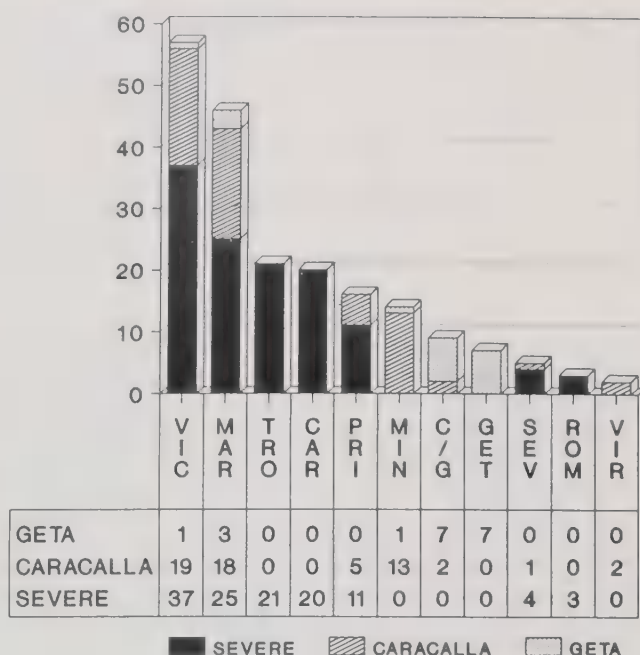


Fig. 5. Répartition de l'iconographie.

3. Mélange des deux premières tendances. Vers la fin du règne, et alors que débute la campagne de Bretagne, on constate un certain retour en arrière. En effet, si le caractère stéréotypé ne disparaît pas entièrement, une seconde tendance à fondement historique resurgit et reste présente jusqu'à la fin de la période. Le remarquable sesterce représentant l'allégorie de la Bretagne est à placer dans cette catégorie.

S'il n'est pas possible d'expliquer de prime abord les raisons de ces changements, il est intéressant de souligner que ceux-ci ne se retrouvent pas uniquement dans la numismatique. Au contraire, l'arc de triomphe, expression privilégiée du relief héroïque monumental semble suivre une évolution comparable.

1. L'arc du Forum. Dedicacé en 203 pour célébrer la victoire éclatante sur les Parthes, ce magnifique monument se compose de nombreuses scènes historiques. Le soin du détail est tel qu'il est même possible d'identifier le siège de villes et les épisodes les plus marquants de la campagne⁴. Le décor exprime l'effort nécessaire à la victoire avec plus ou moins d'exactitude selon les scènes et le rôle prépondérant de l'armée reçoit ici un nouveau couronnement.

2. Un temple de Tebessa⁵. D'époque sévérienne, ce bâtiment dont la frise a été conservée de façon remarquable exprime clairement le même souci que la tendance stéréotypée. En effet, l'iconographie entièrement symbolique semble très éloignée de la réalité des campagnes de Septime Sévère et bien que le style du bâtiment soit indiscutablement sévérien, rien ne permet de rapprocher les détails de la frise d'une quelconque réalité.

3. L'arc de Leptis Magna. Dedicacé environ un an après l'arc du forum, ce bâtiment malheureusement encore assez mal publié correspond à un fléchissement de la tendance stéréotypée. En effet, si la composition est toujours fantastique, certaines réminiscences

⁴ R. BRILLANT, *The Arch of Septimius Severus in the Roman Forum*, dans *MAAR*, 29, 1967. Voir principalement le chapitre XIII. *The Great Panels and their Historical Content*, p. 171-182.

⁵ S. GSELL, *Monuments antiques de l'Algérie*, Paris, 1901, p. 133-137.

historiques ne sont pas sans rappeler la réalité des événements et l'on reconnaît au détour d'une scène, un vêtement, un trophée directement issus des campagnes concernées par l'illustration de l'arc.

Ainsi donc, que ce soit dans la numismatique, ou dans le relief triomphal, il semble bien que différentes tendances se soient succédé tout au long du règne fertile en épisodes guerriers de Septime Sévère. Il est encore un peu tôt pour chercher à expliquer cette évolution. Toutefois, l'idée de notre éminent aîné, G. Ch. Picard, ne nous est pas entièrement étrangère⁶, et nous comptons bien persévérer dans cette direction.



Fig. 1-3. Aureus, Paris, Bibliothèque nationale, inv. 1116, 1103, 1087 (éch. : 2:1); 4. As, Paris, Bibliothèque nationale, inv. 7018; 5-7. Sesterce, Budapest, Nemzeti Museum, inv. KISS 69, BITN 508, NI 871.

⁶ G. C. PICARD, *Les trophées romains* (BEFAR. 187), Paris, 1957, p. 458-460.

Conclusion

Le type monétaire que nous venons de présenter brièvement aurait encore appelé bien des développements qui n'ont pas de place ici. De nombreuses questions restent encore posées en ce qui concerne la composition du programme de la propagande des Sévères. Nous voudrions pourtant déjà souligner quelques points importants.

Si le type «aux prisonniers et aux trophées» procède bien de la thématique générale de la victoire, force est de constater qu'il possède un certain nombre de caractères propres qui en font **un type monétaire représentatif du monnayage des Sévères** :

- Il présente le programme complet de la propagande sévérienne, qui nous est bien connu par ailleurs par les textes⁷, tout en insistant sur les épisodes les plus glorieux et en passant sous silence les moins populaires. Il offre une place prépondérante à la dynastie, à sa pérennité puis à son avenir. Enfin, il conserve une place à la religion, dans laquelle il ne faut voir qu'une justification supplémentaire.

- D'un point de vue historique, il est important de souligner que la frappe de ce type suit de près la chronologie du règne ainsi que la réalité géographique, ce qui en fait un type de circonstance et qui donne encore du poids, si cela était nécessaire, à l'existence d'un programme réfléchi.

- Enfin, pour conclure, nous voudrions encore une fois souligner l'intérêt exceptionnel de l'iconographie du type qui nous présente d'une part la première attestation dans le monnayage romain impérial d'une victoire remportée sur des citoyens romains sécessionnistes et de l'autre une évolution claire dans la manière de penser et d'agencer le décor.

⁷

Z. RUBIN, *Civil-War Propaganda and Historiography*, dans *Latomus*, 173, 1980.

The Monetary Reforms of Nero, Domitian and Septimius Severus and the Finds of Roman Denarii in Eastern and Northern Europe

Lennart LIND*

About 7,500 Roman denarii, almost all of the period 64-200, are known from finds in Sweden (1990). The coins are unearthed mainly on Gotland, which alone accounts for c. 6,500 of the c. 7,500 *denarii* from Sweden. Only c. 1,000 *denarii* belong to other parts of the country, i.e. Öland and the mainland (especially Halland and Skåne). As for the rest of Scandinavia, Denmark has c. 2,000 *denarii*, Norway and Finland almost none.

It has been known for a very long time that monetary measures undertaken *inside* the Roman Empire, for purely internal reasons, in some way might be responsible for the composition of finds of Roman coins made *outside* the frontiers of the Empire. Already in 1860 Theodor Mommsen pointed at a possible link between the composition of the *denarius* finds in Europe outside the *limes*, on the one hand, and the monetary reform of Nero in the 60s (which reduced the weight and the fineness of the silver coins) and the great debasement of the *denarius* under Septimius Severus in the 190s (which diminished the intrinsic value of a coin with one-third), on the other. The relevance of these findings of Mommsen for the material in Sweden, especially that on Gotland, was shown already in 1866 by Hans Hildebrand. There is, however, a third Roman monetary reform which has put its imprint on the *denarius* finds in Central, Eastern and Northern Europe. I will come back to that one presently.

The written sources from antiquity do not have any information (at least not any we can understand) answering the question when and where from the Roman *denarii* found their way into the area of what today is Sweden. As to the general direction of the flow of the coins from the *Imperium Romanum* to present-day Sweden, Gotland included, I think it is possible to establish that by comparing the finds in Sweden with those from the areas between the former Roman Empire and the Sweden of today. Finds of 1 or 2 *denarii* are not so common in Sweden; most coins belong to hoards of varying sizes, some of them consisting of hundreds of coins. I will start with an analysis of the more important finds in Sweden, and then compare them to some finds on the European continent; for reasons that will become obvious, special attention will be given to the early coins of the hoards. For the sake of convenience, I will shorten the argument by using only the largest well described European continental hoards. In the case of finds made outside the *limes* – in Sweden as well as on the continent – I will refer to them under the numbers given in my catalogue from 1981 (Lind, 1981), but in the Figures I have sometimes made use of information from works which were not available then (i.e. Biro-Sey, 1987; Kunisz, 1985; Lind, forthcoming, and Mitkova-Szubert, 1989).

On Gotland there are eight hoards exceeding 200 coins each, i.e. Lind, 1981 nos. 8, 18, 43, 44, 53, 62, 63 and 89, and one with somewhat less than 200 coins, no. 9 (181 coins). Together these nine hoards make up about two-thirds of the c. 6,500 *denarii* unearthed on Gotland. In the rest of the country, there are only two hoards of corresponding size, both from the southern part of the mainland, Lind, 1981 no. 186 (Skåne), and no. 190 (Halland), respectively, together comprising more than 80% of the *denarii* found in Sweden outside Gotland.

Figure 1 shows the contents of these eleven hoards, distributed in per cent on emperors' reigns, the periods before 98 and after 192 forming but one group each, Nero-Nerva and Pertinax-(Septimius) Severus respectively. As for genuine Roman coins, these

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hoards all consist of *denarii* from the period 64-200. As is clear from Fig. 1 all, with the exception of no. 190 (Halland), mainly consist of coins from the five emperors Trajan (98-117), Hadrian (117-138), Antoninus Pius (138-161), Marcus Aurelius (161-180) and Commodus (180-192), but with the exception of no. 44 (Gotland), they all also have coins from before 98 as well as after 192; the latter group is missing in no. 44.

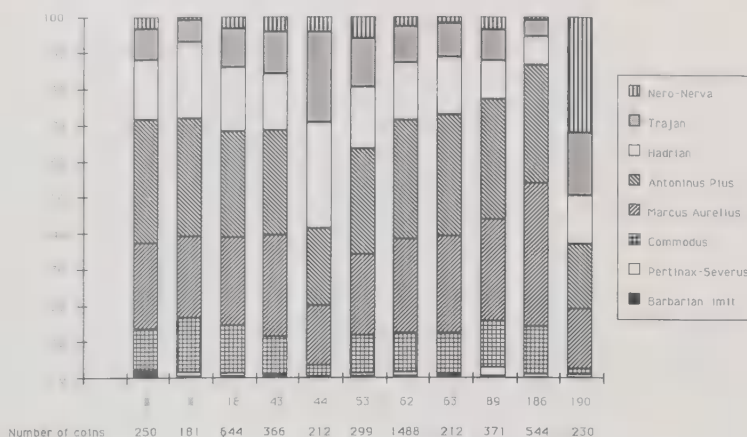


Fig. 1. Composition of hoards from Gotland and the Swedish mainland (emperors' reigns, per cent).

Eight of the nine hoards from Gotland show a clear resemblance to one another. The biggest portion in each one of them, roughly one-third falls, on Antoninus Pius' reign; and next in line comes Marcus Aurelius, with about one-fourth in each hoard; then in seven out of eight cases, comes Hadrian. After this it is normally Trajan and Commodus who end up in fourth and fifth position, with roughly one-tenth each. The coins of the periods before Trajan and after Commodus – as well as the barbarian imitations, which are present in all of these eight hoards – everywhere constitute small groups, which in terms of volume cannot compete with any of the five belonging to the five emperors from the period 98-192. The ninth hoard, the aberrant no. 44, where the coins of Hadrian and Trajan form the largest groups and with more coins of the period Nero-Nerva than from that of Commodus, only serves to emphasize the homogeneity of the others.

None of the hoards from the mainland conform closely to the pattern of the eight hoards on Gotland; the largest one, no. 186 (Skåne), shows a preponderance of coins from the Antonines (138-192) stronger than that in any of the Gotlandic hoards, and in no. 190 (Halland) the pre-98 coins form a more significant portion than in any other find, about one-third of the total, and none of the emperors of the second century has more than 18%. As no. 44 on Gotland, nos. 186 and 190 emphasize the homogeneity of the eight Gotlandic finds.

Where outside Sweden do we encounter hoards with a composition similar to the larger ones on Gotland? As for the large continental hoards, it turns out (and this is very interesting), that just about all hoards of 1,000 or more reasonably well described specimens listed in my catalogue from 1981 (nine in all) are made up essentially of coins from the period of the Antonines (138-192), with the exception of one find from Czechoslovakia (Lind, 1981 no. 394) and one from Rumanian Moldavia (Lind, 1981 no. 403). Also worthy of notice is the pattern of geographical distribution: five of these finds of 1,000 coins or more, all with a composition rather similar to that of the larger finds on Gotland (cf. below), have been discovered at geographical localities – in today's Hungary and Poland – which follow, or are oriented along, a roughly straight south-north line – a line going from the Hungarian plain to Gotland.

The contents of four of these five large continental hoards, Lind, 1981 nos. 279 (Drzewicz), 295 (Nietulisko Male I) and 296 (Nietulisko Male II) from Poland and no.

398 (Kecel) from Hungary, is so well known that it is possible to compare it in detail with that of the more important finds on Gotland. Figure 2 is arranged in the same way as Fig. 1 and shows the percentage composition of these four hoards, as well as that of the nine Gotlandic hoards, which are here shown in two columns only, the two largest hoards, nos. 18 and 62, are presented as one hoard; nos. 8, 9, 43, 44, 53, 63 and 89 have also been combined into one. The four continental hoards all essentially consist of *denarii* from the Nero-Septimius Severus period, as do those from Sweden/Gotland, but some of them have a few earlier and/or a few later coins, i.e. of the Republic (before 30 B.C.) or Marcus Antonius (32-31 B.C.) on one hand, and of Caracalla (211-217) or Macrinus (217-218) on the other. As on Gotland, there are no coins of Nero issued before his monetary reform in A.D. 64.

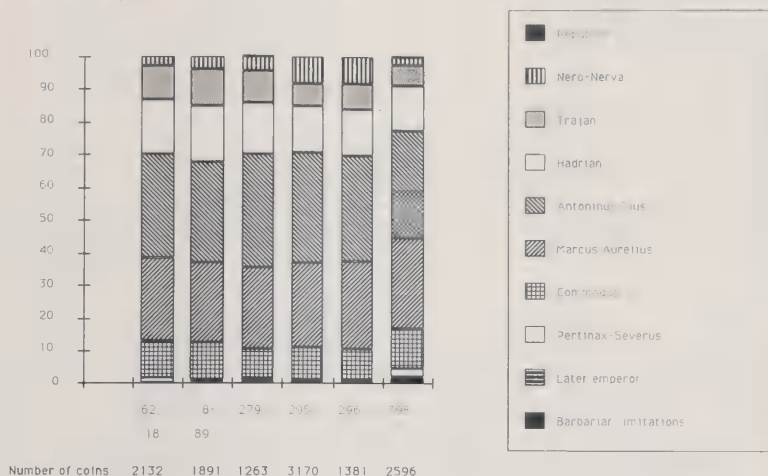


Fig. 2. Composition of Gotlandic and continental hoards (emperors' reigns, per cent).

Here too the coins of Antoninus Pius constitute about one-third of each hoard, Marcus Aurelius comes as number two, with about one-fourth, and in the third place we have Hadrian; Commodus has roughly one-tenth, and Trajan somewhat less. The most important difference between the continental hoards and the Gotlandic ones is that the pre-98 coins in some of the former, i.e. in nos. 295-296, are a distinctly larger group than in any of the latter.

In the nine Gotlandic hoards, as well as in three of the four European continental hoards (the exception is no. 398, from Hungary), the pre-98 coins form a distinctly larger group than those from the period after 192 (and the barbarian imitations, which are lacking in nos. 295-296). As mentioned, I think that the earliest coins of the hoards, i.e. those of the 64-98 period, are of special interest, and they will be treated in some detail; before we go on with this, however, we must say something about the post-192 coins, and about finds from the territory of the former Roman Empire with a series of pre-200 coins similar in structure to that of the hoards outside the *limes* here discussed.

The post-192 coins are shown in Fig. 3, with column-headings as in fig. 2. The coins are distributed on emperors' reigns, but the reign of Septimius Severus (193-211) has been divided into two groups, Septimius Severus 1 and Septimius Severus 2, respectively. The first group comprises coins with the portrait of Septimius Severus issued before his great debasement of the *denarius* in late 194 or early 195 and coins with the portrait of his wife Julia Domna struck 193-196, presumably belonging to the same period; the second group comprises the other coins from Severus' reign.

One observes that the short-lived emperors Pertinax and Didius Julianus (spring 193), as well as Clodius Albinus (193-197), are represented everywhere, except in no. 398, where the post-192 coins exclusively belong to the first Severan dynasty (193-217).

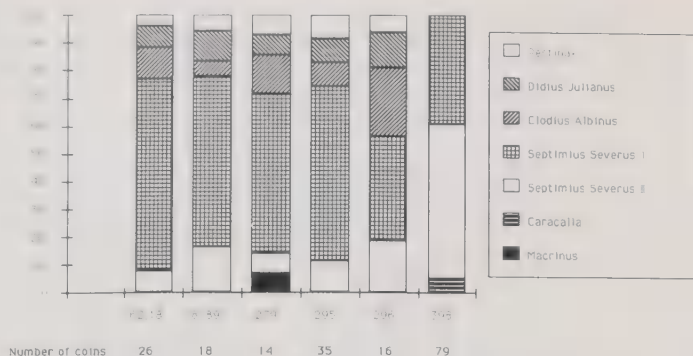


Fig. 3. Post-192 coins in Gotlandic and continental hoards (emperors' reigns, per cent).

In the Gotlandic finds as well as in the continental finds nos. 279, 295 and no. 296 the coins of Severus essentially are from the time before his great debasement of the *denarius* («Septimius Severus I»); in these hoards coins struck after that debasement seem to have been avoided. The conclusion can be drawn that when these Gotlandic and European continental hoards were amassed, the debasement of 194/195 was taken into consideration (except perhaps in the case of no. 398), although this reduction of the coin's intrinsic value certainly was not officially advertised or meant to be easily discovered. The Gotlandic hoards, thus, as well as the European continental ones, must have been formed at a time when, and in a place where, the debasement of Severus and its implications had become well known.

As I have argued elsewhere (Lind, 1988; Lind, forthcoming), the most likely place for the accumulation of these hoards found in Barbarian Europe is, in fact, the Roman Empire, and the most likely point in time A.D. 220 or later. The plausibility of this hypothesis is corroborated by Fig. 4, which compares the contents, distributed in percentages on emperors' reigns, of two of the hoards found outside the *limes*, i.e. Lind, 1981 no. 62 from Gotland and no. 279 from Poland, with the pre-debasement contents of four hoards found inside the former Roman Empire, deposited after 220. These hoards are the huge Reka-Devnia (Mouchmov, 1934) find from Bulgaria, the find of Viuz-Faverges (Pflaum & Huvelin, 1981) in France, that of Cologne (FMRD 6 no.1004, 3) and of Kempten (FMRD I no. 7186) in the southern parts of the FRG.

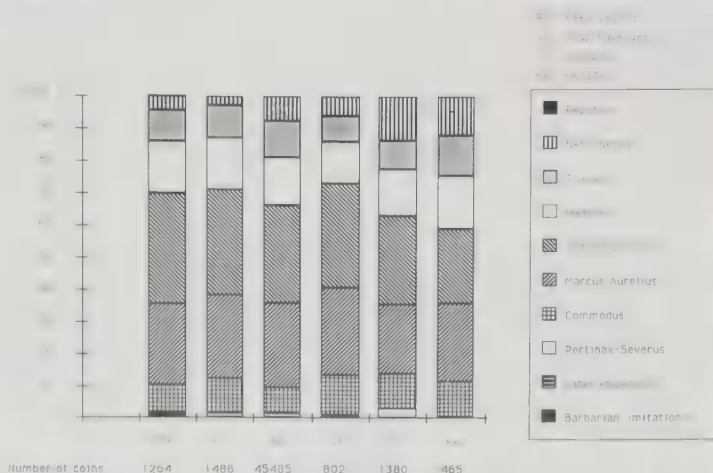


Fig. 4. Composition of nos. 279 and 62 and four Imperial hoards (emperors' reigns, per cent).

The pre-debasement contents of these four hoards, as shown by Fig. 4, have a preponderance of coins of Hadrian, Antoninus Pius and Marcus Aurelius (117-180), and a distinct presence of coins of Trajan (98-117) and of Commodus (180-192); these

hoards clearly demonstrate that *denarii* from the period before the great debasement of Severus (194/195) were at hand in the 220s and later within the borders of the Roman Empire, and that they had a general chronological distribution compatible with that of the *denarii* of the hoards of the Barbarian world, which here are discussed and which, as we have seen, almost exclusively consist of pre-debasement coins. It is thus possible to argue, as I have done, that the *denarii* of these hoards might have been exported *en bloc* in the third century, but the case is not yet fully proven.

Let us now turn to the earliest coins. Figures 5a-d show the percentage distribution on emperors' reigns of the 64-98 period coins of all previously mentioned hoards. As we can see from Fig. 5a, with the eleven Swedish finds, and Fig. 5b, with the Gotlandic and the continental finds arranged in columns as in Fig. 2 above, the most frequent coins among those from the 64-98 period are those of Vespasian's 10-year reign (69-79); by comparison, Domitian's 15-year reign (81-96) is normally underrepresented; one exception is no. 89, Gotland; no. 190 from the mainland, on the other hand, with the largest number of pre-98 coins in any Swedish find (cf. above), conforms to the pattern, see Fig. 5a. As shown by Fig. 5c, with the four finds from the Empire in Fig. 4 above, the relationship is the same in third-century hoards from the Roman Empire. In several finds the coins of Titus' short reign (79-81), and/or that of Nerva (96-98), are more numerous than those issued under Domitian's authority, see no. 62 in Fig. 5a, no. 398 in Fig. 5b and Reka-Devnia and Kempton in Fig. 5c.

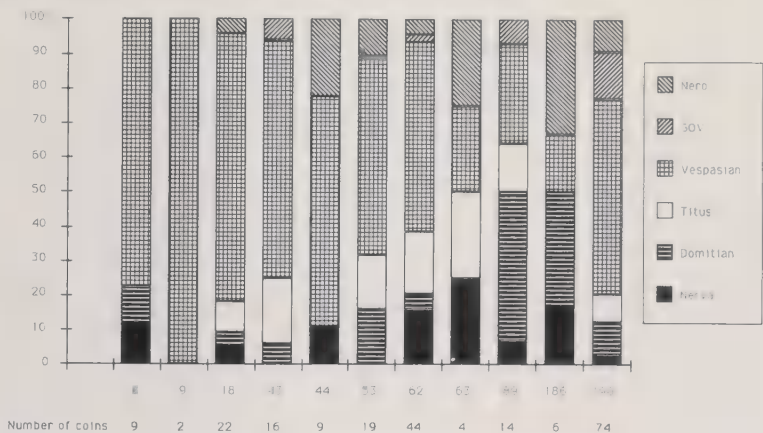


Fig. 5a. Distribution of coins from Nero to Nerva (per cent). Hoards from Gotland and the Swedish mainland.

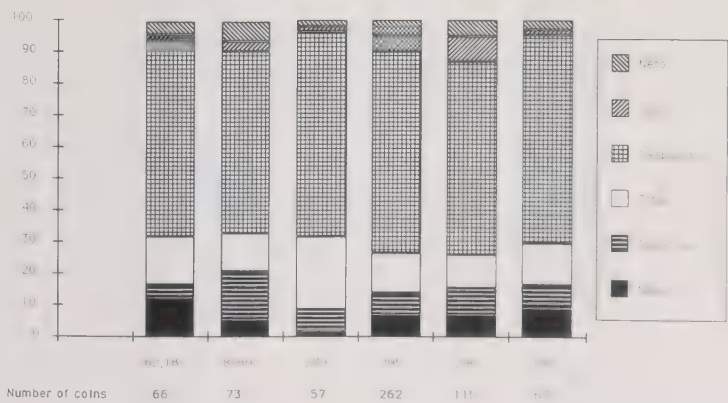


Fig. 5b. Distribution of coins from Nero to Nerva (per cent). Gotlandic and continental hoard.

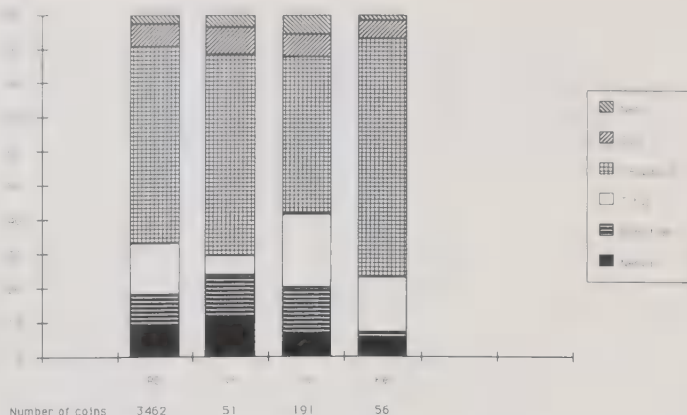


Fig. 5c. Distribution of coins from Nero to Nerva (per cent). Imperial hoards of 3rd century.

The rareness in hoards of coins of Domitian's reign, as compared to those of Vespasian's, was observed early in the twentieth century, but not until recently has it been proven satisfactorily that the explanation must have been that the coins of Domitian's reign, due to their higher intrinsic value, dropped out of circulation faster than those of Vespasian's, according to Gresham's Law.

This, however, was a rather slow process. As shown by Fig. 5d, with the 64-98 contents of nine hoards from the territory of the Roman Empire deposited before A.D. 170, i.e. Castagnaro (Rizzoli, 1914) from northern Italy, Erla (Jungwirth, 1967) from Austria, Londonthorpe (Carson *et al.*, 1979) from Britain, Salasuri (Molnar & Winkler, 1965; Carradice, 1977) from Rumania, Osiek (Wruck, 1937) and Sotin (Brunšmid, 1909) from Yugoslavia, Mocsolad (Gohl, 1905) and Kurd-Gyulaj (Mérey, 1938) from Hungary and Stockstadt (*FMRD* I, no. 6020) from the FRG, the proportions were much more to the advantage of Domitian as late as the 160s than in the third century; see for example Stockstadt. It should be added that the coins of Domitian in these hoards are not evenly distributed over his reign; the 98% fine coins of A.D. 82-85 disappeared at an early date, leaving those of the period 81-82 (89% fine, the standard of his predecessor Vespasian), and those of the period 85-96 (94% fine, the standard of Nero).

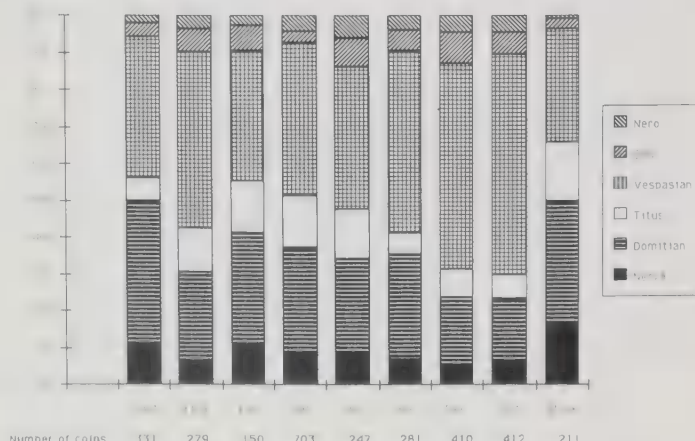


Fig. 5d. Distribution of coins from Nero to Nerva (per cent). Imperial hoards of 2nd century.

Hence, if the coins of the 64-98 period from hoards in Sweden had been brought to the country before c. 170, the portion attributable to the reign of Domitian (81-96) should have been larger, compared to that of Vespasian (69-79) than actually is the case.

unless it can be proven that Gresham's Law was operative in Sweden too. In my opinion this is highly unlikely, at least in the case of the pre-98 coins : they can never have been available in these parts of Europe in quantities large enough for this to happen. The rareness of the coins of the period 81-96 in Sweden and northern Europe is thus further proof that the large Gotlandic and European continental hoards which are here discussed were exported *en bloc* from the *Imperium Romanum*; and this could not have taken place before the third century.

To sum up; as regards the influx of the *denarii* to Sweden and Gotland, we get this general picture : during the third century (or later?) *denarii* were exported in huge quantities from the Roman Empire to what is now Poland (and, I think, the Soviet Union too) and from there onwards to Gotland, and perhaps the rest of Sweden as well. The point of departure on the continent for specimens arriving on Gotland must have been the region surrounding the mouth of the Vistula River; a route of approach over the present-day Germany (FRG and GDR) and/or Denmark is possible for the coins in the rest of the country.

As regards the reasons for this large export of Roman *denarii* in the third century (or later?), we can only speculate.

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Pourquoi les *denarii* frappés après 194 étaient-ils absents dans le Barbaricum ?

Aleksander BURSCHE*

Les trésors de deniers dans l'Europe barbare, c'est-à-dire le Barbaricum (Kolendo, 1981; Sarnowski, 1991) proviennent, pour la plupart, du territoire des civilisations de Przeworsk, de Wielbark et de Černiahov¹. On en a découvert en outre à Gotland, dans le nord-ouest de l'Allemagne, surtout sur le littoral de la mer du Nord, à Bornholm et au Danemark (Lind, 1981; 1991; *FMRD* VII; Kromann, 1989; 1990b). Les trouvailles de deniers sont sensiblement moins nombreuses dans le sud de l'aire de l'Elbe et en Slovaquie et encore plus rares en Bohême et en Moravie. Ce qui est frappant c'est leur absence dans la partie nord de l'aire de l'Elbe (Laser, 1980), dans le domaine balte (Michelbertas, 1972), en Norvège et dans la civilisation de Luboszyce². Presque tous ces trésors, de même que les trouvailles isolées, contiennent des émissions depuis Néron jusqu'aux derniers Antonins, et même quelquefois jusqu'au début du règne de Septime-Sévère. La plupart des trésors s'arrêtent aux émissions de Commode jusqu'aux années 194-195. Les trésors qui s'arrêtent aux deniers datant d'une période soit antérieure soit postérieure à celle-ci sont très peu fréquents³. De même, dans les trouvailles isolées provenant de l'intérieur du domaine barbare, les deniers frappés après 194, ou les anciens antoniniens, sont d'une rareté absolue (Bursche, 1989). La zone du *limes* qui, en raison de sa spécificité, ne fait pas l'objet de la présente étude, fournit une tout autre image du contenu des trésors.

Dans la littérature, l'absence de deniers frappés après 194 fut le plus souvent directement liée à leur dépréciation de l'ordre de 20% effectuée par Septime Sévère en cette même année (Walker, 1978). Selon cette théorie, les Barbares étaient censés sélectionner les deniers non dépréciés, soit les plus anciens. Il convient de rappeler à cette occasion que le marché romain n'a pratiquement pas réagi ou, plutôt, a réagi avec un retard considérable, à la dévaluation du denier, monnaie qui était alors en circulation depuis près de 400 ans (Kunisz, 1971; 1973b; Walker, 1978). Aussi, du moins dans un premier temps, cette réforme n'a pas entraîné de modifications profondes dans la circulation monétaire, ou, plus précisément, n'a pas donné lieu à un brusque retrait de la circulation des monnaies plus anciennes. Cette circonstance est à l'origine d'une hypothèse selon laquelle le terme de l'afflux en masse de deniers se situerait à une époque de loin postérieure à celle que semblent indiquer les plus récentes monnaies dans la plupart des trésors. La structure de leur contenu résulterait dans cette situation d'une sélection opérée par les Barbares censés choisir les monnaies non dépréciées (c'est-à-dire celles d'avant 195). Parmi les partisans de cette hypothèse se trouvent, entre autres, J. Guey (1955), R. Laser (1980; 1983), K. Godłowski (1965), A. Kunisz (1969), J. Wielowiejski (1969; 1980) et beaucoup d'autres chercheurs polonais. Il est impossible de présenter d'une manière exhaustive toutes les opinions existantes. J'en ai dressé un aperçu fort simplifié sous forme de tableau (tableau I) qui ne tient compte que des thèses originales.

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1 Pologne, Ukraine et Moldavie : Lind, 1981; 1991; Kunisz, 1973a; 1985; Kropotkin, 1960; Nudel'man, 1985.

2 Lusace, le bassin du moyen Oder : Domański, 1979.

3 Par exemple en Pologne : Rożdżałów (Kunisz, 1985, p. 188-190), Gierłoż (Kunisz, 1973a, p. 32), Drzewicz Nowy (Kubiak, 1979, p. 29-43), Rywałdzik (La Baume, 1956).

TABLEAU I. LES RAISONS DE L'ABSENCE DANS LE BARBARICUM DE *DENARII* FRAPPÉS APRÈS 194 SELON DIFFÉRENTS AUTEURS.

| Sélection barbare | | | | |
|--------------------------------|----------------------------------|------------------------------|---|--|
| | Cause d'afflux | Période d'afflux | Période de circulation | Fonction |
| J. Guey (1955) | commerce | ? | ? | parures |
| A. Kunisz (1969) | commerce | jusque env. 210 | jusqu'au début du IIIe s. | titre de paiement |
| J. Wielowiejski (1969) | surtout l'ambre | | probablement jusqu'au milieu du IIIe s. | et thésaurisation + mesure de valeur |
| K. Godłowski (1965) | échanges + tributs | jusque env. 250 | jusqu'au milieu du Ve s. | voir ci-dessus |
| Intervention romaine | | | | |
| | Cause d'afflux | Période d'afflux | Période de circulation | Fonction |
| J. Kolendo (1980) | échanges + rachat de prisonniers | jusqu'à 194 | - | interdit de sortie |
| V. Mihăilescu - Bîrliba (1980) | divers | jusqu'à la moitié du IIIe s. | IIIe s. | exportation de meilleurs deniers |
| L. Lind (1988) | échanges IIe s. tributs IIIe s. | après 240 jusqu'à Gallien | jusqu'au milieu du Ve s. | interruption d'échanges au IIIe s. |

Trois arguments de poids permettent, à mon avis, de rejeter la première hypothèse de la sélection barbare :

1. La portée du phénomène.
2. La présence, dans les trouvailles du Barbaricum, de *denarii subaerati*.
3. Les difficultés pratiques à saisir, par un examen organoleptique, une différence de teneur en argent de l'ordre de 20%.

ad 1) L'absence de monnaies d'argent frappées après 194 est notée non seulement dans le Barbaricum mais aussi sur tous les territoires situés en dehors des frontières de l'Empire, notamment en Écosse (Robertson, 1970; 1983), en Irlande (Bateson, 1973), en Afrique orientale, en Inde (Turner, 1989) ou au Sri Lanka (Walburg, 1985). Mis à part le fait qu'il s'agit, en règle générale, de sociétés qui ne possédaient aucune connaissance des lois du marché, une aptitude à sélectionner les monnaies non dévaluées, généralisée sur un aussi vaste territoire et dans le même temps, paraît absolument invraisemblable.

ad 2) Les *denarii subaerati* apparaissent dans les trésors du Barbaricum⁴ mais aussi, entre autres, à Jakuszowice, un site d'habitat de la civilisation de Przeworsk en Pologne méridionale, relativement bien étudié, où l'on a découvert 10 exemplaires (sur 41), tous dans la couche de la période romaine tardive et finale (IIIe et IVe s. - Kunisz, 1985, p. 262-265; Godłowski, 1991). Une question s'impose : pourquoi cette supposée sélection organoleptique n'aurait-elle pas concerné les *denarii subaerati*?

4

Par exemple 4 exemplaires dans un des trésors les mieux étudiés (plus de 30%) de Rywałdzik, dans la voïvodie de Toruń, où la monnaie la plus récente est celle de Septime Sévère des années 200-201 (La Baume, 1956), ou encore 3 exemplaires mis au jour à Tokary avec 4 monnaies de Septime Sévère d'avant 194 sur le nombre total de 433 monnaies étudiées (Kunisz, 1985, p. 219-233).

ad 3) Ce qui témoigne le mieux des difficultés pratiques à distinguer les monnaies d'avant la réforme d'avec celles d'après la réforme, c'est le fait que seules les analyses précises au laboratoire – notamment les résultats des analyses chimiques publiés par J. Guey (1962) – ont permis de rectifier la date de la réforme de Septime Sévère et de fixer celle-ci en 194 et non pas en 197, comme il était admis jusque-là (Kolendo, 1980).

Or, à mon avis, chacun de ces arguments est à lui-même suffisamment fort pour que l'on puisse avancer une autre thèse, à savoir que l'origine de la situation observée se trouve dans l'Empire même.

La présentation de mon hypothèse sur l'existence d'une barrière d'exportation de l'argent sera précédée d'une brève interprétation des sources numismatiques et littéraires.

1. La période de circulation des deniers

Pour ce qui est de cette question, je partage entièrement les opinions de K. Godłowski (1985), L. Lind (1988), L. Hedeager (1988) et S. Nielsen (1989). On connaît plus de 20 trésors dans lesquels apparaissent des monnaies ou des parures de la fin du IV^e et du V^e s.⁵ Leur structure, en ce qui concerne la partie qui se compose de «deniers» dans ces dépôts, ne diffère en rien de celle des trésors ne contenant pas de monnaies aussi récentes⁶. Il semble fort probable qu'une grande partie des trésors qui ne contiennent pas d'éléments aussi tardifs ait pu être enfouie, tout comme les précédents, seulement au IV^e ou au V^e s. Dans les cas peu fréquents où l'on possède le récipient dans lequel fut déposé le trésor, ou des fragments de ce récipient, celui-ci peut être daté de la période romaine tardive (III^e et IV^e s.). Partout où les deniers de la période de Néron jusqu'à Septime Sévère apparaissent dans un contexte daté du point de vue archéologique – notamment dans des sépultures et dans des sites d'habitat – on les situe, en règle générale, dans la phase tardive ou finale de la période romaine tardive (C_{1b} - D), soit au III^e s. et jusqu'au milieu du V^e s. Ainsi par exemple tous les deniers (38) mis au jour sur le site d'habitat à Jakuszowice proviennent des couches supérieures, qui contenaient de la céramique grise, et sont datées des III^e et IV^e s. (Godłowski, 1991). Aucune monnaie n'a été découverte dans une couche ou une structure de la période romaine ancienne. Il en est de même pour les sites dans les marécages au Jutland⁷, à Oland (Skedemosse - Hagberg, 1967) ou pour les sites de Gudme et de Lundeborg à Fyn et Dankirke au Jutland (Kromann, 1987; 1989; 1990a; 1990b). Ce qui donne également à réfléchir est le relativement grand nombre de trésors de deniers et de trouvailles isolées mis au jour sur les territoires de l'Ukraine et de la Moldavie (Kropotkin, 1960; Nudel'man, 1985). Ceux-ci ne peuvent être mis en rapport qu'avec le peuplement de la civilisation de Černiahov et peuvent donc être datés des phases C_{1b}-C3, soit des III^e et IV^e s. Je considère que, face à ces arguments de poids, il est possible d'admettre que dans la plus grande partie du territoire du Barbaricum, les émissions de deniers d'avant Septime Sévère soient restées en circulation et aient été thésaurisées pendant le III^e, le IV^e et une partie du V^e siècle. Étant donné une aussi longue période de circulation, il ne faut pas s'étonner de voir que même les monnaies les plus récentes dans un lot présentent un degré d'usure relativement important. Il est aussi tout à fait légitime de croire qu'une part considérable de ces trésors reflète plutôt une structure de circulation locale que de circulation monétaire à l'intérieur de l'Empire (dépôts secondaires).

5 Par exemple sur le territoire de la Pologne: Zagórzyn, Siedlikowo, Dąbrowno, Frombork; au nord de l'Allemagne - Laatzen et Lengerich; Selce en Slovaquie; Nežyn en Ukraine; Boročice en Volhynie; Smøenge à Bornholm ou encore le célèbre lot de la tombe de Childéric à Tournai.

6 Font en particulier défaut les monnaies de la période allant du règne de Septime Sévère jusqu'à la moitié du IV^e s. Il est à noter qu'à part les deniers, ces trésors ne contiennent aucune autre monnaie.

7 Thorsbjerg, Nydam, Hvarum; Balling, 1962. Illerup; Ilkjaer, Lønstrup, 1983; Kromann, 1989.

2. La fonction des deniers dans le Barbaricum aux IIIe-Ve siècles

Seul le recours aux notions proposées dans la théorie de K. Polanyi (1968), développée par ses successeurs, et surtout par G. Dalton (1977), permet d'expliquer la fonction assignée à la monnaie romaine dans les sociétés germaniques. Dans ce contexte, sur le territoire du Barbaricum au cours de la période romaine tardive, les deniers jouaient le rôle d'une monnaie à destination limitée remplissant surtout des fonctions sociales, politiques et religieuses (Desmonde, 1962). En effet, l'usage de la monnaie n'était pas dominé par l'aspect économique et mieux encore, les notions telles que «prix» ou «bénéfice» pouvaient ne pas être connues du tout. La fonction des monnaies romaines était avant tout celle de moyen de paiement (tributs, contributions, dons, amendes, douaires, dots, services, etc.) et, sur des territoires mieux développés du point de vue économique (centres de production par exemple Jakuszowice, Gudme), probablement aussi celle de moyen d'échanges. Le fait que les deniers apparaissent dans les trésors avec des colliers et des médaillons semble indiquer qu'on leur assignait également la fonction d'indices de prestige et qu'ils constituaient sans doute, surtout pour les élites, des objets d'échanges, de dons. Il n'existe par contre aucune preuve attestant leur fonction de mesures de valeur (à l'opposé de L. Hedeager, 1988) et encore moins de garants de valeur, dans les sociétés germaniques de cette époque qui ne connaissaient pas l'économie de marché. Dans cette perspective, la nécessité de procéder à une sélection de deniers serait en effet tout à fait incompréhensible.

3. Le mode d'arrivage des deniers

La plupart des deniers sont parvenus dans le Nord à la suite d'échanges, dans lesquels une part importante revenait à l'ambre de la Baltique (Wielowiejski, 1980a; 1980b; Kolendo, 1981; Godłowski, 1985). Cependant, ce serait simplifier le problème que de vouloir lier toutes les trouvailles de deniers à ces échanges. N'oublions pas qu'il s'agit de l'époque de Marc-Aurèle et de Commode. Il est donc tout à fait légitime de croire qu'au moins une partie des deniers pénétra dans le monde barbare sous forme de tributs payés aux Germains au temps des guerres marcomanes (Dio, LXXI, 11-12, 19), ou sous Commode (Dio, LXXIII, 6), et surtout en tant que rançon dans le rachat de prisonniers de guerre (Gordon, 1949; Kolendo, 1987). Il semble aussi fort probable que, dans les années 193-194, des sommes particulièrement élevées aient été versées aux Barbares du nord du Danube en vue de maintenir la paix sur la frontière, au moment où l'armée romaine l'avait pratiquement abandonnée sur presque toute sa longueur pour une assez longue période (Birley, 1971). L'historiographie romaine, plutôt favorable à Septime Sévère, a pu ne pas enregistrer ce fait.

4. L'année 194

Tout comme J. Kolendo (1980), je suis d'avis que l'année 194 marque la fin de l'afflux d'une grande masse de deniers sur le territoire du Barbaricum. Cette date ne marque pas automatiquement l'interruption des contacts d'échanges, mais elle indique uniquement un arrêt dans la sortie des monnaies d'argent du territoire de l'Empire. En effet, l'afflux des monnaies de bronze (surtout celui des sesterces) sur le littoral sud de la Baltique ne fut pas interrompu (Bursche, 1992). D'autres catégories d'importations romaines continuaient à affluer, certaines même, telles par exemple la *terra sigillata*, en quantité très importante (Kolendo, 1981; Godłowski, 1985; Lund Hansen, 1988). L'arrêt de l'afflux des deniers serait en effet dû à un obstacle de la part de l'Empire. Cette barrière, à mon avis et contrairement à ce qu'en pense J. Kolendo (1980), était de nature économique et non pas juridique.

À la suite d'une politique fiscale déplorable de Commode et, surtout, en conséquence des sommes considérables payées à l'armée en guise de *donativa* au moment de la prise du pouvoir par les empereurs successifs, la caisse de Septime Sévère se trouva complètement vide en 193 (Birley, 1971; Kolendo, 1980). En plus, l'empereur avait besoin de monnaies pour payer la solde des trois légions qui venaient d'être créées. Face à une production insuffisante des mines, incapables de répondre à la demande courante,

et en raison de l'exportation en masse des deniers durant les époques antérieures et, en conséquence, du déficit d'argent et de monnaies d'argent sur le marché (Walker, 1978), la valeur réelle de ce métal, de même que celle des deniers, ne fit qu'augmenter. Cette augmentation fut, certes, compensée dans une certaine mesure par la diminution de la teneur en argent du denier. Sur le territoire de l'Empire, cette dépréciation ne fut point remarquée.

Conclusions

Bref, les interprétations déjà données de ce phénomène présentent une véritable confusion de causes et d'effets. L'augmentation de la valeur réelle de l'argent métallique (y compris de celle des deniers) fut sans doute très brusque dans le premier temps du règne de Septime Sévère. Ce phénomène rendit désavantageuse son exportation au-delà du *limes* où ne parvenaient point les fluctuations subtiles de valeurs que connaissait l'économie du marché dans l'Empire et où restaient toujours en vigueur les «relations traditionnelles»⁸. Le fait que la sortie du denier au-delà des frontières de l'Empire devint désavantageuse fut d'abord remarqué par les commerçants romains spécialisés dans les échanges lointains, surtout par les grossistes qui disposaient de sommes considérables puis, dans une moindre mesure, par le reste de la population⁹.

En guise de conclusion, je voudrais formuler deux propositions dont, à mon avis, il faudrait tenir compte dans les recherches ultérieures visant à élucider le problème étudié.

1. Le rapport statistique (au moyen de tests vérifiant la pertinence des différences) de la répartition chronologique des deniers contenus dans les trésors du Barbaricum et dans ceux du territoire de l'Empire.

2. Le réexamen des trésors conservés pour la présence de *subaerati*.

La mise à exécution de ces projets permettrait sans doute de vérifier les hypothèses qui viennent d'être avancées et qui ne constituent qu'une nouvelle tentative d'explication de cette question.

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⁸ Si l'on peut évoquer l'existence de quelques relations stables, car, je le rappelle, les Germains n'assignaient certainement pas à la monnaie une fonction de mesure de valeur.

⁹ Au sujet des relations directes des commerçants (*negotiatores*) avec les banquiers (*argentarii et numularii*) : Andreau, 1987, p. 111, 122-124.

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Indian Imitations of Roman Coins

Peter BERGHAUS*

Roman coins were imported into India during different phases :

1. Roman Republican denarii

Most of these denarii are in worn condition, but denarii of the second century B.C. do occur also in just slightly worn state (e.g. stray finds from the river bed near Nasik, MA). Most of the Republican denarii may have reached India not before the end of the 1st century B.C.¹

2.1. Julio-Claudian pre-Reform denarii

Some of these early Imperial denarii seem to have entered India in the early 1st century already; they are of just slightly worn condition (e.g. Budinatham hoard). Other denarii, mostly found in A.P., are more worn. These denarii mostly are hit by chisel cuts on the obverse and usually punchmarked (Akkenpalle hoard, A.P.). These worn coins apparently have been imported into India later, probably not before the end of the 1st century². The majority of the Julio-Claudian denarii has been found in the Coimbatore area (TN), especially near Vellalore³. Post-reform denarii are extremely rare in India (cp. Vespasian denarius, slashed on the obverse, British Museum, part of the Pudukottai hoard, TN).

2.2 Julio-Claudian aurei

Julio-Claudian pre-Reform aurei are concentrated in TN and AP. Aurei of Augustus (*RIC* I² 206 and 209) and Tiberius (*RIC* I² 25, 27, and 29) have been found in a great number in South India. Aurei of C.Caesar are scarce in India, the aurei of Claudius and Nero (pre-Reform) are common (e. g. Nagavarapupadu hoard, AP). Most of the Julio-Claudian aurei are hit by chisel-cuts, few are punchmarked in addition.

3. Aurei Nero (post-Reform) - Commodus (A.D. 64-192)

Aurei from Nero (post-Reform) to Nerva are scarce in Indian hoards and mostly worn.

Aurei of Trajan, in a somewhat better condition, are more common like the earlier Hadrian aurei. The later Hadrian issues (after A.D. 132) are still more common and of apparently better condition. The aurei of Antoninus Pius, especially those until TR POT XVI (= A.D. 152/53, cp. Valluvali hoard, KE), are the most frequent ones of this phase including the issues for Diva Faustina mater. In the majority they are in excellent condition. Aurei after A.D. 152/153 (later Antoninus Pius, Marcus Aurelius, Commodus) are scarce again (cp. Kumbalam hoard, KE). There are no chisel cuts or punchmarks on these aurei.

4. Aurei Septimius Severus - Caracalla (A.D. 193-217)

These aurei are mostly known from AP and northern Kerala. Some of the Severian aurei are in excellent condition, other ones are worn, pierced twice or looped; sometimes refilled holes occur. Punchmarks and parallel chisel cuts are scarce. Apparently some of

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¹ D.W. MAC DOWALL, 1990a.

² D.W. MAC DOWALL, 1990a, 1990b and 1991.

³ P.J. TURNER, 1989, p. 81-84.

these coins, mostly being stray finds, have been buried shortly after their arrival in India. Other ones have circulated for a long time (until the 5th/6th centuries A.D., cp. Akki Alur hoard, KA), often being used as ornaments.

5. *Late Roman and Byzantine solidi and late Roman/Byzantine Aes*

After a gap of 180 years Roman coins occur again in India. Roman and Byzantine solidi, mostly of the 5th century, are common in South India, many of them being pierced twice. The majority of the coins is of an excellent condition. Late Roman and Byzantine bronze and copper coins similarly as in Sri Lanka⁴, have invaded India since the 4th century. Mostly they seem to have circulated in Tamil Nadu and Gujarat.

Indian imitations of Roman coins have first been dealt with by Gupta 1965, who mainly concentrated on the imitations of the Augustus and Tiberius denarii out of the Akkenpalle hoard. A.P. Metcalf 1979 for the first time has studied a group of Indian imitations of Roman aurei of the second century A.D. from South India, followed by Hill 1984, who published the Indian imitation of a Septimius Severus aureus. Turner 1989 for the first time reproduced a greater number of imitations from India, but did not exclude in her discussion the possibility of an European origin for some of the imitations⁵.

In her catalogue of the hoards and finds of Roman coins from India, the imitations are listed separately. Berghaus 1989, 1990 and 1991 discussed the imitations of the Augustus and Tiberius denarii as well as the imitations of Julio-Claudian pre-Reform aurei and of aurei of the time Nero-Caracalla in a larger context.

Indian imitations, which differ distinctly from those from Europe⁶, can be divided into different phases :

1. Struck imitations of Julio-Claudian denarii (Augustus and Tiberius)
2. Imitations of Roman aurei
 - 2.1 Struck imitations of Julio-Claudian pre-Reform aurei
 - 2.2 Struck imitations of aurei Trajan-Caracalla
3. Cast imitations of aurei Nero - Caracalla
4. Imitations of Late Roman and Byzantine solidi
 - 4.1 Struck imitations of solidi
 - 4.2 Cast imitations of solidi
5. Imitations of Late Roman and Byzantine bronze and copper coins.

1. *Struck imitations of Augustus and Tiberius*

These imitations mostly occurred in the Akkenpalle hoard, AP⁷. One specimen was in the Nasthullapur hoard, A.P. Stray finds of Tiberius imitations are noted from Nasik, MA, Arikamedu, TN and the Madras area. Die-links have been noted for specimens in the Akkenpalle hoard, A.P., as well⁸ as among the imitations from Nasik and Madras. All the imitations of the Akkenpalle hoard are defaced by chisel cuts, in addition they are punchmarked. It is difficult to date these imitations. The Nasik and Madras specimens are well preserved and may have been made in the early 1st century A.D. The Akkenpalle specimens are less well preserved than the older coins in the hoard; they have got the same punchmarks as the original ones. It might be possible that they were made in the course of the 1st century A.D. and punchmarked later, i.e. in the early 2nd century.

4 R. WALBURG, *Antike Münzen aus Sri Lanka/Ceylon*, in *Studien zu Fundmünzen der Antike*, ed. M.R. ALFÖLDI, vol. 3, Berlin, 1985, p. 44-50.

5 P.J. TURNER, 1989, p. 39.

6 P. BERGHAUS, *Barbarische Nachahmungen*, in *Reallexikon der germanischen Altertumskunde*, 2, Berlin-New York, 1976, p. 48-49.

7 P.L. GUPTA, 1965, p. 65-67.

8 e.g. Akkenpalle 714 + 719 (Augustus). P. BERGHAUS, 1990, p. 85.

2.1 Struck imitations of Julio-Claudian pre-Reform aurei

In the Nagavarapupadu hoard, AP, three imitations of Roman aurei could be noted, all being slashed on the obverse. Two of the imitations are imitating the common Augustus type, one is imitating a Claudius aureus (cp. *RIC* I² 3, 30, 33, 35), perhaps even for Nero Claudius Drusus (cp. *RIC* I² 69 and 71), bearing Indian (?) inscriptions on either side⁹. The Tiberius aureus has been imitated in clay also¹⁰. In addition lead imitations occur also.

2.2 Struck imitations of aurei Trajan - Caracalla

Just a few struck imitations, certainly contemporaneous with the original aurei, could be noted hitherto. In the Valluvalli hoard, KE, there were two die-linked specimens, imitating an Antoninus Pius aureus. From Karnataka, the imitation of a Septimius Severus aureus could be documented.

3. Cast imitations of aurei Nero - Caracalla

There are numerous cast imitations of aurei of the time Nero - Caracalla, the majority counterfeiting aurei of Antoninus Pius, Diva Faustina mater, Septimius Severus and Julia Domna. Combinations of obverses with reverses of different emperors occur : Obv. : Diva Faustina mater, Rv. : Nero (Turner 1989, pl. I, 249 out of Veeravasaramu hoard, A.P.), or Obv. : Septimius Severus, Rv. : Marcus Aurelius (Hill 1984). «Die»-duplicates occur, especially among the Septimius Severus imitations of the hoard from Calicut district, KE. Some of the cast imitations are defaced by single or parallel chisel cuts on the obverse (c.p. Turner 1989, pl. I + II), some are pierced twice. The colour of these cast gold pieces is an individually light one. The double piercing of quite a few of these imitations and of solidi of the 5th/6th centuries permits a dating of the cast aurei imitations to a later time than that of the original ones. The 5th and 6th centuries seem to be comprehensible for the dating of these counterfeits. The cast imitations of this kind have been found in hoards from Andhra Pradesh as well as from Kerala, a small hoard (Uppavahr) is known even from Maharashtra. Still it is difficult to locate these fakes. European imitations of aurei of the 2nd and early 3rd centuries are clearly different in style and colour.

4. Imitations of Late Roman and Byzantine solidi

4.1 Struck imitations

The Akki Alur hoard, KA, contained 3 Severian aurei¹¹ along with 43 solidi of the time Theodosius II (A.D. 408-450) to Justinus I (A.D. 518-527), among which at least 5 imitations Theodosius II - Anastasius.

4.2 Cast imitations

A cast imitation of a Zeno solidus, found in North Kanara District, KA, pierced twice, is in a private collection.

5. Imitations of late Roman and Byzantine bronze and copper coins

These imitations have not yet been researched in detail. Apparently there are similarities with those found in Sri Lanka¹².

⁹ P. BERGHAUS, 1990, p. 75.

¹⁰ P. BERGHAUS, 1991, p. 115, no. 7.

¹¹ Not Indian imitations as suggested by P.J. TURNER, 1989, p. 37. Cp. P. BERGHAUS, 1989a, p. 96.

¹² R. WALBURG, *l.c.*, p. 44-50.



Fig. 1. Augustus, denarius, Akkenpalle hoard no. 719. Hyderabad; 2. Tiberius, denarius, stray find, Madras area. Private collection; 3. Augustus, aureus, Nagavarapupadu hoard. Hyderabad; 4. Tiberius, aureus, clay imitation. Hyderabad; 5. Claudius, aureus, Nagavarapupadu hoard. Hyderabad; 6. Septimius Severus, aureus, stray find, Karnataka. Private collection; 7. Diva Faustina mater/Nero, aureus, Veeravasaramu hoard. Madras; 8. Septimius Severus, aureus, Trichur District hoard. Private collection; 9. Julia Domna (?), aureus, Upparipeta hoard. Madras; 10. Julia Domna/Domitian, aureus, South India. British Museum; 11. Caracalla (?), aureus, punchmarked, South India. British Museum; 12. Zeno, solidus, cast, stray find North Kanara District. Private collection (Photographs : Author. Kind permission of the public collections and the private collectors for reproduction).

Conclusion

Most of the struck Indian imitations of Roman coins certainly were supposed to circulate together with the original Roman coins. For the cast imitations of Roman coins of the 2nd century, some of which made in a rude style and hardly to be dated before the 4th century, there remains the possibility, that they were destined to be used as jewelries. The imitations of the late solidi were made for circulation, but often used as the original ones as ornaments.

Together with the original Roman and Byzantine coins, found in India, the Indian imitations are an important source for the history of trade between the mediterranean world and India.

*Finds and hoards**1. Finds and hoards of denarii 1st century A.D.*

1. Akkenpalle, AP. Turner, 1989, p. 47.
2. Nasthullapur, AP. Turner, 1989, p. 70.
3. Nasik, MA. Private collection.
4. Arikamedu, TN. Private collection.
5. Madras (area of), TN. Private collection.
6. Budinatham, TN. Turner, 1989, p. 50.

2. Finds of aurei 1st century

7. Nagavarapupadu, AP. Archaeological Museum, Hyderabad.

3. Finds of aurei 2nd century

8. Valluvalli, KE. Turner, 1989, p.79 (to be dated earlier, i.e. t.p.q. 152/53).
9. Karnataka. Private collection.

4. Finds of cast imitations of aurei

10. Bhagavanpavam, AP. Turner, 1989, p. 49.
11. Calicut District, KE. Private collection.
12. Chakherbedha, MP. Turner, 1989, p. 51.
13. Dharmavaripalem, AP. Archaeological Museum, Hyderabad.
14. Gopalapuram, AP. Archaeological Museum, Hyderabad.
15. Gumada, A.P. Turner, 1989, p. 54.
16. Upparipeta, TN. Turner, 1989, p. 79.
17. Uppavahr, MA. Directorate of Archaeology, Bombay.
18. Veeravasaramu, AP. Turner, 1989, p. 80-81.

5. Finds of solidi 5th/6th centuries

19. Akki Alur, KA. Turner, 1989, p. 48.

6. Finds of cast solidi

20. North Kanara District, KA. Private collection.

ABBREVIATIONS

A.P. Andhra Pradesh; KA Karnataka; KE Kerala; MA Maharashtra; M.P. Madhya Pradesh; T.N. Tamil Nadu.

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Le trésor d'Éauze (France, Département du Gers) : monnaies et bijoux du III^e siècle ap. J.-C.

Daniel SCHAAD*

Le trésor d'Éauze a été mis au jour le 18 octobre 1985 au cours d'une fouille de sauvetage menée par le Service Régional de l'Archéologie de Midi-Pyrénées sur le site d'*Elusa*¹, l'antique capitale de la province de Novempopulanie.

La composition du trésor tel qu'il est apparu aux archéologues lors de sa découverte est la suivante : 28.003 monnaies de billon qui se répartissent entre le règne de Commode et celui de Gordien III pour les 4.706 deniers, et les règnes de Caracalla, de Gallien et de Postume (261) pour les 23.297 *antoniniani*; 45 monnaies de bronze d'Auguste à Gallien, dont un médaillon de Marc Aurèle; trois *aurei* du II^e siècle; un important lot de bijoux en or composé de sept colliers, dont un collier monétaire, un phylactère, trois bracelets en tôle d'or, cinq paires de pendants d'oreilles, six bagues et anneaux, un camée, six intailles; à cela s'ajoutent sept cuillères en argent, trois lingots du même métal, deux couteaux à lame métallique et manche d'ivoire sculpté, quatre épingles en corne et un anneau-clef en bronze.

L'étude des monnaies a permis de mettre en évidence le caractère original de ce trésor. Il convient en premier lieu de souligner la totale atypie que forme le modeste lot des 45 monnaies de bronze – principalement des *asses* et des *dupondii* – dont 80% des monnaies sont postérieures à 192, et encore 49% à 238, ce qui range ce lot dans un horizon non-aquitain tout en le rapprochant des trésors d'origine méditerranéenne continentale ou insulaire. Les monnaies d'argent forment à l'évidence deux lots distincts, l'un antérieur à 238, l'autre – les deux tiers du dépôt – postérieur à cette date et dont la moitié environ a été frappée sous les règnes de Valérien et de Gallien. On relèvera également l'étonnante concentration des monnaies d'Élagabale (tous les types sont représentés), ainsi que des monnaies de Valérien et de Gallien de l'atelier de Rome et en particulier le lot des ORIENS AVGG de Valérien, presque tous du même coin de droit, dont le surnombre déséquilibre la structure du trésor.

L'intérêt de ce dépôt est encore accru par la présence des bijoux qui forment un ensemble homogène, de grand prix, remarquable par la variété des pièces et leur grande qualité esthétique. L'unité stylistique et formelle de ces parures montre qu'elles ont été réunies au III^e siècle en un temps relativement court – l'espace d'une génération – et que leur lieu de fabrication est à situer dans un atelier rhénan.

Au total, le trésor d'Éauze forme un ensemble original de grande valeur, dont la composition ne peut être, dans l'état actuel de notre documentation, rattachée au groupe des trésors aquitains ou de Gaule du Nord.

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¹ *Le trésor d'Éauze*, Toulouse, 1992.

Die Zwölf Arbeiten des Herakles in der römischen Reichsprägung

Rainer VOLLKOMMER*

Die Arbeiten des Herakles spielten in der griechischen Literatur und Kunst eine wichtige Rolle¹. Bereits Homer im 9. oder 8. Jh. v. Chr.² und Hesiod um 700 v. Chr.³ nennen vereinzelte Taten, und Peisandros im 6. Jh. v. Chr.⁴ und Pindar am Anfang des 5. Jh. v. Chr.⁵ reihten diese auf. Seit der Mitte des 6. Jh. v. Chr. kommen auch mehrere Abenteuer des Helden auf ein und demselben Denkmal vor⁶. Obwohl die Metopen des Zeustempels in Olympia⁷ uns schon die kanonisierte Form der zwölf Arbeiten mit den Szenen des Nemeischen Löwen, der Lernäischen Hydra, des Erymanthischen Ebers, der Kerynitischen Hindin, der Stymphalischen Vögel, des Stalls des Augeias, des Kretischen Stiers, der Pferde des Diomedes, des Gürtels der Amazonenkönigin, der Rinder des Geryon, des Kerberos und der Äpfel der Hesperiden zeigen, erfolgte die Festsetzung auf diese Zahl und Episoden, so wie wir sie heutzutage behandeln, wohl erst in römischer Zeit. Apollodors *Bibliothek* aus dem 1. oder 2. Jh. n. Chr.⁸, Hyginus' *Fabeln* aus dem 2. Jh. n. Chr.⁹ und Quintus Smyrnäus im 4. Jh. n. Chr.¹⁰ berufen sich als erste auf diese Geschichten und wir übernahmen von diesen die Kanonisierung.

In der römischen Kunst scheinen sich die Arbeiten des Herakles allgemeiner Beliebtheit zu erfreuen. Neben einzelnen Taten wurden auch mehrere Abenteuer oder der ganze Zyklus auf Sarkophagen (Abb. 1)¹¹, Mosaiken¹², Steinreliefs¹³, Silber- (Abb. 2)¹⁴ und Bronzegeschirr¹⁵, Goldklingeln¹⁶, usw. illustriert.

Wie schon Hans Voegtli aufwies, fanden sie auf den kaiserzeitlichen Münzen des östlichen Mittelmeerraumes ebenfalls großen Anklang¹⁷. Über 60 Städte bildeten sie ab. Die Taten beherrschen gegenüber den Einzelwiedergaben des Helden das Gesamtbild.

* Redaktion LIMC, Basel.

- 1 J. BOARDMAN, W. FELTEN, G. KOKKOROU-ALEWRAS, S. WOODFORD, L. TODISCO, P. BRIZE, V. SMALLWOOD, *LIMC*, V, 1990, S. 1-111 s.v. *Herakles*.
- 2 Hom., *Il.*, 8, 362-369; *Od.*, 11, 623-626.
- 3 Hes., *Theog.*, 287-294, 313-318, 327-333.
- 4 Herakleia, M. DAVIES, *Epicorum Graecorum Fragmenta*, Göttingen, 1988, S. 131-133.
- 5 *Frag.*, 169 Snell/Maehler, dazu C. PAVESE, *The New Heracles Poem of Pindaros*, in *HSCP*, 72, 1968, S. 81-83.
- 6 J. BOARDMAN, *LIMC*, V, 1990, S. 6-7 s.v. *Herakles* Nr. 1697-1704 mit Zeichnungen und Taf. 6-9.
- 7 ID., a.O., S. 7 *Herakles* Nr. 1705 mit Zeichnung und Taf. 10-11.
- 8 Apoll., *Bibliothek*, 2, 74-126.
- 9 Hyginus, *Fab.*, 30.
- 10 Quintus Smyrnäus, 6, 200-268.
- 11 Siehe ID., J. BOARDMAN, *LIMC*, V, 1990, S. 9-11 s.v. *Herakles* Nr. 1714-1725, 1730-1734, 1752 mit Zeichnungen und Taf. 17-21, 23, 30; ebenda mit weiteren Hinweisen.
- 12 Z.B. ders., a.O., S. 9-14 *Herakles* Nr. 1713, 1739-1743 mit Zeichnungen und Taf. 16, 25-27; ebenda mit weiteren Hinweisen.
- 13 Z.B. ID., a.O., S. 10-15 *Herakles* Nr. 1726, 1745-1751, 1753 Taf. 22, 24-25, 28-29; ebenda mit weiteren Hinweisen.
- 14 Z.B. ID., a.O., S. 10-15 *Herakles* Nr. 1727, 1756 Taf. 31; ebenda mit weiteren Hinweisen.
- 15 ID., a.O., S. 15 *Herakles* Nr. 1758.
- 16 ID., a.O., S. 11 *Herakles* Nr. 1728 mit Zeichnung und Taf. 22.
- 17 H. VOEGTLI, *Bilder der Heldenepen in der kaiserzeitlichen griechischen Münzprägung*, Alsch, 1977, S. 8-45.

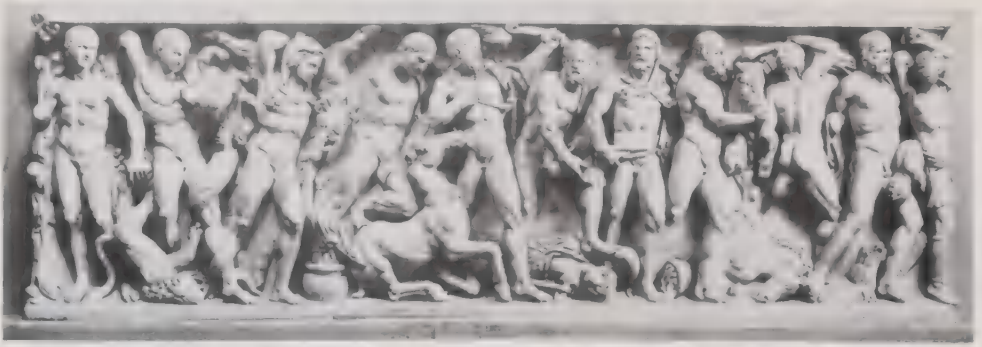


Abb. 1. Sarkophag, 2. Hälfte 2. Jh. n. Chr. Mantua, Pal. Ducale. Foto DAI Rom 62.191.



Abb. 2. Skyphos aus Silber, um 20 v. Chr. - 10 n. Chr. Neapel, Nat. Mus. Foto DAI Rom 70.1496.

Auf den römischen Reichsprägungen fand hingegen eine entgegengesetzte Entwicklung statt. Die Arbeiten beschränken sich auf zwei Zeitabschnitte von Hadrian, 119-125 n. Chr.¹⁸, bis Commodus, 192 n. Chr.¹⁹, und von Gallienus, 253-268 n. Chr.²⁰, bis Constantin I., 312/313 n. Chr.²¹. Dagegen dominieren die Einzelwiedergaben von Galba, 68 n. Chr.²², bis Constantin I.²³, Maximinus Daia²⁴ und Licinius²⁵, 313 n. Chr. Wäre nicht eine einmalige Serie mit dem Zyklus des

¹⁸ Siehe Anm. 23 und 33.

¹⁹ Siehe Anm. 40, 42 und 43.

²⁰ Siehe Anm. 38.

²¹ Äpfel der Hesperiden : AE Follis, Rom : C. 276-277; *RIC* VI, 387 Nr. 301-302; 409 Nr. 79.

²² Büste des Hercules : AR Denar, Spanien : C. 365; *RIC* I, 207 Nr. 49; *BMC Emp* I, 294 mit Anm.; P.-H. MARTIN, *Die anonymen Münzen des Jahres 68 nach Christus*, Mainz, 1974, S. 70 Nr. 9 Taf. I; C.H.V. SUTHERLAND, *The Concepts Adsertor and Salus as used by Vindex and Galba*, in *NC*, 144, 1984, S. 29-32.

²³ Äpfel der Hesperiden : s. Anm. 33; Herakles Farnese : AE Follis, Cyzicus und Antiochia : C. 279; *RIC* VI, 592 Nr. 89 b; 595 Nr. 108; 644 Nr. 170 c; Frank Sternberg, Zürich, Auktion 15, 11.-12. April 1985, 81 Nr. 715 Taf. 34; Hercules mit Victoriola : AE Follis, Rom, C. 278; *RIC* VI, 387 Nr. 298-300 Taf. 7.

²⁴ Herakles Farnese : AE Follis, Heraclea, Antiochia, Nicomedia und Cyzicus : C. 105; *RIC* VI, 542 Nr. 77; 565 Nr. 68; 567 Nr. 75; 592 Nr. 89 a; 594 Nr. 104; 639 Nr. 152 Taf. 15; 644 Nr. 170 b; Robertson, *RIC* V, 103 Nr. 73 Taf. 30; 106 Nr. 114-115 Taf. 31.

Herakles (Abb. 3-14) mit zusätzlich als dreizehnte Episode Antaeus für Postumus im Jahre 269 n. Chr. geschaffen worden²⁶, dann würde sogar die Hälfte aller Arbeiten auf Reichsprägungen fehlen. Denn ausschließlich unter diesem Kaiser sehen wir die Szenen von den Stymphalischen Vögeln (Abb. 7)²⁷, vom Stall des Augias (Abb. 8)²⁸, dem Kretischen Stier (Abb. 9)²⁹, den Pferden des Diomedes (Abb. 10)³⁰, dem Gürtel der Amazonenkönigin (Abb. 11)³¹ und Geryon (Abb. 12)³².



Abb. 3. AV Aureus, Postumus. Paris, Cab. Méd.; 4. AV Aureus, Postumus. Wien, Kunsthist. Mus., Münzkabinett; 5. AE Abschlag, Postumus. Berlin (Ost), Staatl. Mus., Münzkabinett.; 6. AE Abschlag, Postumus. Paris, Cab. Méd.; 7. AV Aureus, Postumus. Paris, Cab. Méd.; 8. AE Abschlag, Postumus. Köln, Römisch-Germanisches Mus. (Maßstab : 2 : 1).

- 25 Herakles Farnese : AE Follis, Cyzicus und Antiochia : C. 60; *RIC* VI, 644 Nr. 170 a; V. PICOZZI, *Monete rare o inedite delle età tetrarchica e costantiniana*, in *RIN*, 75, 1973, S. 145 Taf. 1, 4.
- 26 P. BASTIEN, *Les travaux d'Hercule dans le monnayage de Postume*, in *RN*, s. 6, 1-2, 1958-1960, S. 59-78, Taf. 4-7; H. VOEGTLI, a.O. Anm. 17, S. 59-64 Taf. 15; B. SCHULTE, *Die Goldprägung der gallischen Kaiser von Postumus bis Tetricus (Typos, IV)*, Aarau-Frankfurt-am-Main, 1983, S. 41-44, 106-116 Nr. 120-153 Taf. 10-12.
- 27 C. 112; *RIC* V, 2, 359 Nr. 271; G. ELMER, *Die Münzprägung der gallischen Kaiser in Köln. Trier und Mailand*, in *BJb*, 146, 1941, S. 1 Nr. 481 Taf. 7, 4; P. BASTIEN, a.O., S. 76 Nr. 26 Taf. 5; B. SCHULTE, a.O., S. 111 Nr. 136 Taf. 11.
- 28 C. 134; *RIC* V, 2, 365 Nr. 350; G. ELMER, a.O., Beiblatt, VIII, 2 Nr. 530; P. BASTIEN, a.O., S. 76 Nr. 23-25 Taf. 5; B. SCHULTE, a.O., S. 111 Nr. 135 Taf. 11.
- 29 C. 114, 127; F. GNECCHI, *Medaglioni*, III, Mailand, 1912, S. 62-63 Nr. 7 Taf. 155, 20; *RIC* V, 2, 359 Nr. 272; 349 Nr. 138; G. ELMER, a.O., S. 1 Nr. 488 Taf. 7, 7; P. BASTIEN, a.O., S. 76 Nr. 27 Taf. 5; H. DRESSEL, *Die römischen Medaillone des Münzkabinetts der Staatlichen Museen zu Berlin*, Dublin-Zürich, 1973, S. 268-269 Nr. 160 Taf. 19, 160 (I); B. SCHULTE, a.O., S. 111 Nr. 137 Taf. 11.
- 30 C. 138-140; *RIC* V, 2, 359 Nr. 275; 365 Nr. 352-353; G. ELMER, a.O., S. 2 Nr. 538, 541, 543 Taf. 7, 13; P. BASTIEN, a.O., S. 76-77 Nr. 28-30 Taf. 5; B. SCHULTE, a.O., S. 112 Nr. 138-140 Taf. 11.
- 31 C. 123-124; *RIC* V, 2, 362 Nr. 305; 365 Nr. 348; G. ELMER, a.O., S. 2 Nr. 509, 511-513 Taf. 7, 9; P. BASTIEN, a.O., S. 77 Nr. 31-44 Taf. 6; B. SCHULTE, a.O., S. 112-113 Nr. 141-146 Taf. 11-12.
- 32 C. 121; *RIC* V, 2, 365 Nr. 346; G. ELMER, a.O., S. 1 Nr. 497, 499 Taf. 7, 6; P. BASTIEN, a.O., S. 77 Nr. 45-46 Taf. 6-7; B. SCHULTE, a.O., S. 114 Nr. 147 Taf. 12.



Abb. 9. AV Aureus, Postumus. Berlin (Ost), Staatl. Mus., Münzkabinett; 10. AV Aureus, Postumus. Paris, Cab. Méd.; 11. AE Abschlag, Postumus. Berlin (Ost), Staatl. Mus., Münzkabinett; 12. AE Abschlag, Postumus. Berlin (Ost), Staatl. Mus., Münzkabinett; 13. AE Abschlag, Postumus. Berlin (Ost), Staatl. Mus., Münzkabinett; 14. AE Abschlag, Postumus. Paris, Cab. Méd. (Maßstab : 2 : 1).

Überhaupt nur drei Arbeiten wurden vor Postumus illustriert : die Äpfel der Hesperiden unter Hadrian, 119-128 n. Chr. (Abb. 17)³³, Antoninus Pius, 140-143³⁴ und 155 n. Chr.³⁵, Mark Aurel, 174 n. Chr.³⁶, Commodus, 177 n. Chr.³⁷ und Gallienus, nach 256 n. Chr.³⁸, der Erymanthische Eber unter Hadrian, 119-

- 33 a. Hercules, l. Schiffsprora, r. Flußgott Baetis : AV Aureus, Rom : C. 814; *RIC* II, 355 Nr. 125; P.L. STRACK, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts II. Die Reichsprägung zur Zeit des Hadrian*, Stuttgart, 1933, Nr. 68 Taf. I; *BMC Emp* III, 273 Nr. 274-276 Taf. 51, 21;
 b. Hercules in Tempel, unten l. Kopf und r. Schiffsprora oder Baetis : AV Aureus, Rom : C. 1083. 1087-1088; P.L. STRACK, a.O., Nr. 87-88 Taf. 2; *BMC Emp* III, 253 Nr. 98 Taf. 48, 17-18;
 c. Hercules in Tempel, umgeben von zwei Hesperiden, unten Baetis oder Schiffsprora und Baetis oder Boot und Kopf oder Fisch und Baetis : AV Aureus, Rom : C. 1084-1086; P.L. STRACK, a.O., Nr. 89-90 Taf. 2; *BMC Emp* III, 254 Nr. 99 Taf. 48, 19-20; Taf. 49, I;
 d. Hercules, Baum und Hesperiden : AE Medaillon : F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 4 Nr. 10; 7 Nr. 43 Taf. 42, I; P.L. STRACK, a.O., Nr. 441.
- 34 Hercules wie Anm. 33 d., aber seitenverkehrt : AE Medaillon : C. 1158-1159; F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 19 Nr. 87 Taf. 52, 10; 19 Nr. 88 Taf. 54, I; P.L. STRACK, a.O., S. 228-231 Nr. 540, 554.
- 35 Hercules, r. Victoria, l. Baum : AE Medaillon : C. 214; F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 11, Nr. 15 Taf. 45, 2; P.L. STRACK, a.O., S. 238-239 Nr. 626.
- 36 AE Medaillon : F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 28 Nr. 12 Taf. 60, 2.
- 37 AE Medaillon : F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 67 Nr. 141 Taf. 87, 8; H. DRESSEL, a.O., S. 119-121 Nr. 60 Taf. 9, 60 (7).
- 38 AR Antoninian, Asien und Rom : C. 1250-1251; *RIC* V, I, 104 Nr. 454; 159 Nr. 327; 186 Nr. 623; A. ALFÖLDI, *Die römische Münzprägung und die historischen Ereignisse im Osten zwischen 260 und 270 n. Chr.*, in *Berytus*, 5, 1938, S. 53 Nr. 3 Taf. 19, 4-5, 16; K.J.J. ELKS, *The Eastern Mints of Valerian and Gallienus : The Evidence of Two New Hoards from Western Turkey*, in *NC*, s. 7, 15, 1975, S. 107; G. MAZZINI, *Monete Imperiali Romane*, IV, Mailand, 1957, S. 89 Nr. 1250 Taf. 27.

125 n. Chr.³⁹, und Commodus, 192 n. Chr.⁴⁰ und der Nemeische Löwe unter Commodus, 192 n. Chr. (Abb. 15-16)⁴¹. Die Äpfel der Hesperiden nehmen hierbei eine Sonderstellung ein, weil die Einzelwiedergabe dieser Arbeit durch die Beifügung eines oder mehrerer Äpfel der Hesperiden verbunden und gleichzeitig wiederum als statuarisches Kultbild verwendet werden kann. So überwiegen auch klar die Einzeldarstellungen bei dieser Episode. Vor den Ausgaben Hadrians kennen wir in der kaiserzeitlichen Reichsprägung keine Darstellungen mit Anspielungen auf die Arbeiten des Herakles und danach konzentriert nur seit Postumus, 269 n. Chr., bis Constantin I., 312/313 n. Chr.

Die letzten drei genannten Legenden, die des Nemeischen Löwen, des Erymanthischen Ebers und der Äpfel der Hesperiden, sind zugleich die ikonographisch reichsten und differenziertesten Szenen. So wurden z. B. beim Nemeischen Löwen die sechs folgenden Schemata kreiert. Bei einem ersten auf einem Bronzemedallion des Commodus von 192 n. Chr. (Abb. 15) steht der bärtige Hercules frontal, Kopf nach r., die Rechte ruht auf auf Boden gesetzter Keule und mit der Linken hält er den toten Löwen am Hinterbein⁴². Bei einem zweiten Schema wiederum auf Bronzemedallions des Commodus von 192 n. Chr. (Abb. 16) sitzt der bärtige Hercules in Dreiviertelansicht nach r. auf dem toten Löwen, die Rechte ruht auf auf den Löwen gesetzter Keule und in der auf der Hüfte gesetzten Linken hält er einen Bogen, l. vor dem Löwen befindet sich ein Köcher⁴³. Bei einem dritten unter Postumus von 262-269 n. Chr. (Abb. 3) steht Hercules nach l., er ist vom Rücken gesehen; er würgt mit beiden Händen den Löwen, unter seinem Fuß befindet sich eine Keule⁴⁴. Bei einem vierten (Abb. 17) steht der bärtige Hercules nach r. und würgt den Löwen mit beiden Händen, hinter ihm befindet sich bisweilen eine Keule. Dieses Schema war im späten 3. und frühen 4. Jh. n. Chr. sehr beliebt und wir sehen es auf Prägungen von Diocletian, 287-289 n. Chr.⁴⁵, Maximianus Herculus (Abb. 17), 289-290 und 292 und 294-295 n. Chr.⁴⁶, Carausius, 286-293 n. Chr.⁴⁷ und Constantius Chlorus, 293 n. Chr.⁴⁸. Ein anderer

39 AE Medaillon : F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 21 Nr. 112; P.L. STRACK, a.O., Nr. 493; H. DRESSEL, a.O., S. 33 Nr. 11 Taf. 1, 11 (3).

40 AE Medaillon : C. 209; F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 55 Nr. 33-34 Taf. 80, 5-6; H. DRESSEL, a.O., S. 161-162 Nr. 87 Taf. 12, 87 (2); M.R. KAISER-RAIB, *Die stadtrömische Münzprägung während der Alleinherrschaft des Commodus*, Frankfurt-am-Main, 1980, Taf. 29, 6.

41 Siehe Anm. 42 und 43.

42 AE Medaillon : C. 206-207; F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 55 Nr. 32 Taf. 80, 4; ID., *Medaglioni*, III, Mailand, 1912, S. 37 Nr. 194; M.R. KAISER-RAIB, a.O., Taf. 29, 3.

43 AE Medaillon : C. 209; F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 55 Nr. 35 Taf. 80, 7; M.R. KAISER-RAIB, a.O., Taf. 29, 8.

44 AV Aureus und AR Denar : C. 125-126, 131-132; *RIC* V, 2, 338 Nr. 23-24; 359 Nr. 274; 365 Nr. 349; G. ELMER, a.O., S. 45 Nr. 305; 47 Nr. 327; *Beiblatt*, VIII, 2 Nr. 521-523 Taf. 7, 12; P. BASTIEN, a.O., S. 75 Nr. 1-5; B. SCHULTE, a.O., S. 83 Nr. 36 Taf. 3; 84 Nr. 40 Taf. 4; 106-108 Nr. 120-124 Taf. 10.

45 AR Antoninian, Lyon : C. 523-526; *RIC* V, 2, 230 Nr. 100-106; P. BASTIEN, *Le monnayage de l'atelier de Lyon. Dioclétien et ses corégents avant la réforme monétaire (285-294)* (*Numismatique Romaine*, 7), Wetteren, 1972, S. 154-155 Nr. 206-211 Taf. 14.

46 AE Medaillon, AR Quinarius (Rom) und Antoninianus (Lyon) und AV Aureus (Rom) : C. 554, 587-591, 593-594, 640-652; F. GNECCHI, *Medaglioni*, III, Mailand, 1912, S. 83 Nr. 51-53 Taf. 158, 28; 83 Nr. 58; *RIC* V, 2, 271-272 Nr. 444-445, 454-459; 277 Nr. 499-500; 280 Nr. 528-529; P. BASTIEN, a.O. Anm. 45, S. 124 Nr. 45 Taf. 3; 155-158 Nr. 212-228 Taf. 14-16; 160 Nr. 236 Taf. 17; Robertson, *RIC* IV, 241 Nr. 19 Taf. 55; 244 Nr. 38; 245 Nr. 39-40 Taf. 55.

47 AR Antoninian, Colchester oder Münzstätte unbekannt : C. 404; *RIC* V, 2, 501 Nr. 444; 545 Nr. 1056; Robertson, *RIC* IV, 270 Nr. 151 Taf. 60.

48 AR Antoninian, Ticinum : C. 298; *RIC* V, 2, 301 Nr. 669; Frank Sternberg, Zürich, Auktion 7, 1977, 101 Nr. 946 Taf. 47.



Abb. 15. AE Medaillon, Commodus. Madrid, Arch. Mus. (Maßstab : 2 : 1).



Abb. 16. AE Medaillon, Commodus. Slg. Gnecci (Maßstab : 2 : 1).

unter Diocletian⁴⁹ und Maximianus Herculus (Abb. 19)⁵⁰ von 287-289 n. Chr. benutzter Aufbau ähnelt sehr dem vorhergehenden, Hercules wird nun aber von einer nach r. fliegenden Victoria bekrönt, die mit der Linken einen Palmzweig schultert. Ein letztes, sechstes Schema, auf Münzen Constantins I. (Abb. 20), 307-308 n. Chr.⁵¹, und des Maxentius, 308-310 n. Chr.⁵², wiederholt den geläufigen Typus 4 mit umgekehrter Stellung.

Während also bei den drei bereits vor Postumus illustrierten Arbeiten diverse Ikonographien zur Geltung kommen, nehmen die restlichen drei nur seit diesem Kaiser erschienen Episoden der Hindin, der Hydra und des Kerberos bei späteren Münzen

49 AR Antoninian, Lyon : C. 527; *RIC* V, 2, 230 Nr. 107; P. BASTIEN, a.O. Anm. 45, S. 158 Nr. 229 Taf. 16.

50 AR Antoninian, Lyon : C. 652-656; *RIC* V, 2, 273 Nr. 460-462; P. BASTIEN, a.O. Anm. 45, S. 158-159 Nr. 230-235 Taf. 17; Robertson, *RIC* IV, 245 Nr. 41; 245 Nr. 42 Taf. 55.

51 AE Follis, Ticinum : C. 274, 710-711; *RIC* VI, 293 Nr. 87 Taf. 4; 295 Nr. 99.

52 AE Follis, Rom : C. 55; *RIC* VI, 378 Nr. 214.

immer wieder die gleiche unter Postumus geschaffene Darstellung auf. So kniet der bärtige Hercules unter Postumus (Abb. 6), 269 n. Chr.⁵³, Probus, 278 n. Chr.⁵⁴, Maximianus Herculus, 286-296 n. Chr.⁵⁵, Constantius Chlorus, 294-296 n. Chr.⁵⁶, und unter Diocletian, 295-296 n. Chr.⁵⁷, mit dem l. Fuß auf den Rücken der Hindin nach r. und packt mit beiden Händen das Tier am Geweih. Sowohl unter Postumus (Abb. 4), 269 n. Chr.⁵⁸, Maximianus Herculus, 293-296 n. Chr.⁵⁹, Constantius



Abb. 17. AV Aureus, Maximianus Herculus. London, BM. (Maßstab : 2 : 1).

- ⁵³ AE Dupondius und Sesterz, AR Denar, Köln : C. 109, 445-446; *RIC* V, 2, 356 Nr. 241; 357 Nr. 253; 364 Nr. 340; G. ELMER, a.O., *Beiblatt*, VIII, I Nr. 467; P. BASTIEN, a.O. Anm. 26, S. 76 Nr. 13 Taf. 4; ID., *Le monnayage de bronze de Postume (Numismatique Romaine, 3)*, Wetteren, 1967, S. 161 Nr. 137-138 Taf. 28; B. SCHULTE, a.O., S. 109 Nr. 128 Taf. 10.
- ⁵⁴ AV Aureus, Siscia : *RIC* V, 2, 79 Nr. 585 Taf. 3, 10.
- ⁵⁵ AE Medaillon, AR Quinar (Lyon), AV Aureus (Lyon, Rom und Trier) : C. 595-597; F. GNECCHI, *Medaglioni*, III, Mailand, 1912, S. 83 Nr. 54; *RIC* V, 2, 280 Nr. 530; VI, 173 Nr. 84 b; P. BASTIEN, *Le monnayage de l'atelier de Lyon. Dioclétien et ses corégents avant la réforme monétaire (285-294) (Numismatique Romaine, 7)*, Wetteren, 1972, S. 124 Nr. 46 Taf. 3; Robertson, *RIC* V, 23 Nr. 41 Taf. 8.
- ⁵⁶ AV Medaillon (5 Aurei) oder Aureus, Trier : C. 297; *RIC* VI, 173 Nr. 85; Robertson, *RIC* V, 34 Nr. 2 Taf. 12.
- ⁵⁷ AV Aureus, Trier : *RIC* VI, 173 Nr. 84 a; I. LUKANC, *Diocletianus. Der römische Kaiser aus Dalmatien*, Wetteren, 1991, S. 133 Nr. 55 mit Abb.; 145 Nr. 45 mit Abb.; 185 Nr. 5 mit Abb.; 198 Nr. 7 mit Abb.; 203 Nr. 5 mit Abb.
- ⁵⁸ AR Denar, AV Aureus, Köln : C. 110-111; *RIC* V, 2, 364 Nr. 341-342; G. ELMER, a.O., *Beiblatt*, VIII, I Nr. 473. 475-476 Taf. 7, 5; P. BASTIEN, a.O. Anm. 26, S. 75 Nr. 6-12 Taf. 4; B. SCHULTE, a.O., S. 108-109 Nr. 125-127 Taf. 10.
- ⁵⁹ AE Medaillon und AV Aureus, Siscia, Rom, Trier : C. 139, 253-256, 258, 304, 638; F. GNECCHI, *Medaglioni*, II, Mailand, 1912, S. 128 Nr. 4 Taf. 126, 5; *RIC* VI, 164 Nr. 9-10; 174 Nr. 91; 455-457 Nr. 1. 2. 12. 14. 25; Robertson, *RIC* V, 23 Nr. 40 Taf. 8. Das selbe Schema, aber umgekehrt : AV Aureus, Rom, Maximianus Herculus, 294 n. Chr. : P. BASTIEN, C. METZGER, *Le trésor de Beaurains (Numismatique Romaine, 10)*, Wetteren, 1977, S. 79 Nr. 168-169 mit Abb.

Chlorus, 293-296 n. Chr.⁶⁰, und Diocletian, 302-305 n. Chr.⁶¹, schwingt der bärtige Hercules mit der erhobenen Rechten die Keule nach l. gegen die Hydra, während er mit der Linken einen Kopf des Ungeheuers hält. Schließlich schreitet der bärtige Hercules unter Postumus (Abb. 13), 269 n. Chr.⁶², Probus (Abb. 21), 278 n. Chr.⁶³, und Maximianus Herculus (Abb. 22), 302-303 n. Chr.⁶⁴, immer nach r., schultert mit der Linken die Keule, hat das Löwenfell über die l. Schulter gelegt, den Kopf zum dreiköpfigen Kerberos zurückgewendet, den er mit der Rechten am Zügel hält.



Abb. 18. AV Aureus, Hadrian. London, BM.; 19. AR Antoninian, Maximianus Herculus. London, BM.; 20. AE Follis, Constantin I. London, BM.; 21. AV Aureus, Probus. London, BM. (Maßstab : 2 : 1); 22. AV Aureus, Maximianus Herculus. Paris, Cab. Méd. (Maßstab : 2 : 1).

Die Darstellungen herakleischer Arbeiten auf römischen Reichsprägungen sind folglich selten und ikonographisch wenig einfallsreich. Zudem fanden sie fast ausschließlich auf Medaillons und Goldmünzen eine Würdigung. Auf Nominalen geringeren Wertes erscheinen der Nemeische Löwe erst in tetrarchischer Zeit und die Äpfel der Hesperiden ab Gallienus nach 256 n. Chr. Diese klare Trennung dokumentiert zweifelsfrei, daß im Westen des Römischen Reiches bei der breiteren Bevölkerung die Abenteuer des griechischen Helden wenig Anklang fanden. Dort zählte hauptsächlich der bereits zum Gott gewordene Hercules. Daher dominieren seine Einzelwiedergaben, die an Kultbilder erinnern. Bei einer erneuten Sichtung des archäologischen Materials läßt sich die gleiche Feststellung auf die anderen Gattungen des Kunstschaffens übertragen. Denn obwohl auf diesen die Taten viel häufiger vorkommen, bemerkt man bei genauerem Hinsehen, daß im Westen diese insbesondere auf kostspieligeren Werken aus Silber (Abb. 2)⁶⁵, Stein, insbesondere Marmor (Abb. 1)⁶⁶, und auf Mosaiken⁶⁷ anzutreffen sind. Auf billigeren Materialien wie Ton oder Bronze überwiegen hingegen eindeutig die Einzeldarstellungen. Der griechische Held mit seinen Abenteuern blieb der breiteren Bevölkerung des Westens verschlossen und nur für ein gehobeneres Publikum oder für solche, die sich dazugehörig fühlten, von Interesse. Die kaiserliche Münzpolitik trug dieser Kluft Rechenschaft und prägte vor allem Medaillons und Aurei mit Szenen von Heraklesarbeiten, die für diesen kleineren ausgewählten Kreis bestimmt waren.

60 AV Aureus, Trier und Siscia : C. 323; *RIC* VI, 174 Nr. 92; 455 Nr. 3; P. BASTIEN, C. METZGER, *Le trésor de Beaurains* (Numismatique Romaine, 10), Wetteren, 1977, S. 93 Nr. 213 mit Abb.

61 AV Aureus, Siscia : C. 139; *RIC* VI, 457 Nr. 25; I. LUKANC, a.O., S. 129 Nr. 27 mit Abb.

62 AR Denar, AV Aureus : C. 122; *RIC* V, 2, 365 Nr. 347 Taf. 13, 16; G. ELMER, a.O. Anm. 27, *Beiblatt*, VIII, 1 Nr. 503-506 Taf. 7, 8; P. BASTIEN, a.O. Anm. 26, S. 78 Nr. 52-55 Taf. 7.

63 AV Aureus, Siscia : *RIC* V, 2, 79 Nr. 588.

64 AV Aureus, Trier : C. 259; K. PINK, *Die Goldprägung des Diocletianus und seiner Mitregenten*, in *NZ*, 64, 1931, S. 34 Taf. 2, 32; *RIC* VI, 169 Nr. 48.

65 Siehe Anm. 14.

66 Siehe Anm. 11 und 13.

67 Siehe Anm. 12.

Iuno Regina's Mint : Antiochia

Ferenc REDŐ*

I had dealt with propaganda activity mirrored in coinage in several studies¹, when I realized that the topic can be unfolded only through the analysis of coin-frequency data, characteristic of the various propaganda programs and through the examination of the structure of the mint. Namely if it is not known what emphasis is given to a propaganda program, nothing is known of it. This emphasis can be measured with the frequency distribution of types within coin hoards, which, in turn, may shed light on the whole structure of coinage. The analyses will set apart the really common types and those of marginal importance, the finished and the interrupted series, and issues².

In the following pages I would like to sketch coinage in Antiochia from the end of Gallienus' reign until the end of Aurelianus' rule³.

Data concerning the frequency of some types have revealed that in this period the different types of a certain coin issue did not have the same rank. There were constant types with continuous minting and of identical size order, and there were others which meant only an additional colouring, maybe an experiment, to the propaganda palette. The significant alterations between the frequencies of some certainly constant types within the coinage of an emperor are due to the fact that the issues are not contained the same series of types. Thus within the whole coinage of an emperor there is a frequency order of types characteristic of the policy of the emperor.

The above described coin issue practice is characteristic of the production in the Antiochian mint in the first half of the examined period. The tables indicate the constant and the accessory elements of the type series separately.

The type series of the last issue of emperor Gallienus will be examined first (Table I Gallienus).

The short analysis of the rather weak political program will serve the comparison of the following features. This type series contains the most significant types of the emperor-cult. The preservation of the emperor was put in charge of the main god, *Iupiter Conservator*, his *salus*, of *Apollo*. His merits were propagated by the *virtus*-type illustrated with the depiction of *Mars*, while the emperor himself appears in the type of *Sol Invictus*. The *Saturn*-type, propagating his everlasting rule, is slightly mythical, while type of *Mercurius*, *Luna* and *Venus*, could mean to the public no more than that these deities patronized the emperor.

Claudius Gothicus, who succeeded Gallienus, did not change the structure of Antiochian coinage except for one thing. This significant change appears in the propaganda policy (Table I Claudius Gothicus). This phenomenon is especially striking

* Budapest.

¹ F. REDŐ, *Numismatical Sources of the Illyrian Soldier Emperors Religious Policy* (Diss. Arch., 11/2), Budapest, 1973. p. 53-157; ID., *Religious Policy of the End of Principatus*, in *Ziva Antika*, 25, 1975, p. 461-468.

² ID., *The Dating of Coins and the Structure of Coinage. The Antiochian Mint under Gallienus*, in *MittArchInst der UAW*, 14, 1985, p. 93-119.

³ I have based my study on a wider scope of eastern coinage in this period including coin production in Antiochia, Tripolis and partly Cyzicus from Gallienus until Diocletian. This study has modified the earlier issue scheme and the datation in several points. I cannot cite the data justifying my statements within the frames of a lecture. My dissertation which contains the whole material: *Eastern Imperial Coinage in the Period of the Crisis of Principatus. The Nahr-Ibrahim Hoard*, Budapest, 1985 is in print.

since, normally, the first coin series of the new emperor bear the characteristic of the old type series. This is logical, as a new policy has to be evolved before changing these features, which, on the one hand, is perhaps not the first task following the succession to the throne, and, on the other, it would take a considerable time and even so would not necessarily be different from the ambitions of the predecessor. Contrary to all these, Claudius Gothicus first Antiochian issue reveals that the main patrons of the emperor where an eastern deity pair : *Serapis Conservator* and *Isis*. His merits were illustrated by *Minerva*. The Sol-type is totally absent from the constant types of the issue. As compared to the Iuppiter-Apollo-Mars-Sol propaganda characteristic of Gallienus, this series has slight eastern traits, which is not at all characteristic of Claudius II and, in the same time, seems to have been less powerful. The only type inherited from Gallienus was the wholly indifferent *Mercurius*, and the *Aequitas*-personifications were also members of the constant series.

TABLE I. ANTIOCHIA.

| Obv. Issue | GALLIENVS AVG VI | IMP C CLAVDIVS AVG I | II | III |
|---|--|---|---|---|
| Mark of issue | PXV | Type sequence of the 1st issue with or without officina marks | Reduced type sequence of the 1st issue | Rev. types with two deities (or personifications) |
| Constant elements of type sequence | IOVI CONSERVAT SOLI INVICTO with globe) LVNA LVCIF SALVS AVG (Apollo) VIRTVS AVG (Mars stg. r.) AETERNITAS AVG (Saturn) FIDES AVG (Mercurius) VENVS AVG | NEPTVN AVG IVNO REGINA CONSER AVG (Serapis) IVVENTVS AVG (Hercules) SALVS AVG (Isis) VIRTVS AVG (Minerva) FIDES AVG (Mercurius) AEQVITAS AVG | NEPTVN AVG IVNO REGINA IVVENTVS AVG (Hercules) SALVS AVG (Isis) VIRTVS AVG (Minerva) AEQVITAS AVG SOL AVG SALVS AVG (Apollo) | SALVS AVG (Diana and Apollo) SPES PVBLIC (Aesculapius and Hygeia) AETER AVG (Sol, Luna) CONSER AVG (Serapis) FELIC AVG (Felicitas, and Fortuna) CONCOR AVG (Ceres, Proserpina) VIRT AVG (Vulcanus, Minerva) |
| Additional elements of type sequence | — | VICTORIA AVG REGI ARTIS (Vulcanus) DIANAE VICTR SOL AVG | SALVS AVG (Sol) | — |
| Date | spring 267- March 268 | March 268-1st half of 269 | 2nd half of 269 | First months of 270 |

Further two constant types, the most significant elements of the change, have not yet been mentioned. They are *Iuno Regina* and *Hercules Iuventus*. Both are novelties as compared to Gallienus' Antiochian types and both bear a special emphasis in the absence of Iupiter, Apollo and Mars. Queen Iuno was certainly a dominant element of the propaganda in a type series without Iupiter while, regarding Hercules' significance in the younger generation of deities, it should be mentioned that two decades later the emperors became *iovi* and *herculi*.

Consequently, if we accept that some types of Claudius' first Antiochian issue, the ones which concerned him personally, seem to be deliberately weak, it should also be noted that two of the new types, those which can by no means concern him, have special force. Who can these types refer to? — A queen and a young emperor of the period : Zenobia and her son, Vabalathus. By that time, the forceful empress of Palmyra may have spread her power onto Antiochia as well⁴. The accessory types of the issue have not yet been discussed since these motives do not offer special consequences. Nevertheless, it may be mentioned that the traditional type of *Sol* which for Gallienus had personified the emperor himself as an *invictus deus*, appeared this time only as one of the gods of the pantheon. Another less important phenomenon is that the adjective *victrix* was lended to a goddess, *Diane* in an accessory type. In such a context, the *victoria*-type, being rather dull without the adjective, cannot refer to the victory of the emperor over the Goths.

Before starting the propaganda-political analysis of the next issue, let us add that this issue of the coinage was finished, its volume reached that of the last Gallienus issue.

Disregarding the Devret hoard of irregular distribution, more than 500 coins are known from the period⁵.

In its tendency, the type series of the next issue is totally identical with the former. A striking negative change is the absence of the perhaps most important type of the emperor cult : the *conservator*-type, while there are three *salus* types : the traditional *Apollo*, the new *Isis* and the most recent with the depiction of *Sol*. The latter borrowed *Apollo*'s aspect in this context and represented a deity in relation with epidemics, causing or preventing them. This may be the only propaganda motive referring really to the emperor. Namely, the imperial army was fighting against an epidemic at that time. *Iuno Regina* and *Hercules Iuuentutis* were still the most powerful elements of the issue lasting for about half a year with a volume half as large as the previous. There are approximately 100 coins in the hoards grouped here. The second issue was a restricted variety of the first both in regard of production and of propaganda, the third one, however, reflected another unusual although energetic change in tone.

The most striking difference is the new compositional theory : there are two figures on the reverse of the coins, usually a man and a woman, occasionally two women. Considering how many of the contemporary population could read the legend, and how many illiterate people were informed about the legitimacy of the dualistic power only by the depiction, we must admit that this was a brilliant idea from the queen of Palmyra.

The more educated people could analyze the types themselves. The *conservator*-type returned with *Serapis* and *Isis* illustrations, according to the eastern taste. The imperial merits represented so far by *Minerva*, and could be interpreted also as military merits, were now personified by *Vulcanus* and *Minerva*, strangely divesting the *virtus*-type from its original military content. The invincible *Sun* god with *Luna* at its side became a time deity in the sphere of *aeternitas*. *Apollo* and *Luna* take care of the emperor's *salus* which now, in the time of the deadly pestilence, had the proper meaning of «health», explained by the type of *Aesculapius* and *Hygeia* : they are the hope of the people : *spes publica*. The joint type of *Felicitas* and *Fortuna* fosters a rather universal meaning which anybody may own.

The *concordia*-type seems to be more interesting with the depictions of *Ceres* and *Proserpina*. In general, the *concordia*-types are significant signs of the declaration of an agreement or of a consolidation has a sense only if it can be doubted. *Concordia augustorum* usually propagated an agreement between co-emperors, while *concordia militum* meant that the soldiers were loyal to the emperor. In the issues analysed so far, this type was absent. At the same time the spreading of a centre of power relatively independent of the emperor could be observed in coinage. This, in itself, may serve as an explanation of the appearance of the *concordia*-type. The depiction is a special feature of the type which, together with the legend, refers to the most important myth of *Ceres* : the great goddess went angry with *Iupiter* and retained her blessing from the earth because of having been bereaved of her daughter. The father of the deities realized that he had to give in and as result of compromise the goddess returned, hand in hand with *Proserpina*, to the immortals. *Concordia* meant here, is the result of appeasing of the goddess. We must say that this is already impertinence. Let us not forget that on the obverse of all these coins, *Claudius Gothicus*' portrait and titles are displayed.

⁵ The hoards taken into consideration are : Nahr-Ibrahim (see above n. 3), Antiochia (D.B. WAAGE, *Antioch on the Orontes IV/2 : Greek, Roman, Byzantine and Crusader Coins*, Princeton, 1952, p. 104-114, Roquefeuil (S. DE ROQUEFEUIL, *Trésor d'antoniniani frappés en Orient*, in *RN*, s. 6, 11, 1970, p. 116-139), Komin (Z. BARCSAY-AMANT, *The Hoard of Komin (DissPann, 11/5)*, Budapest, 1937), Capharnaum (A. SPIJKERMAN, *A Hoard of Syrian Tetradrachms and Eastern Antoniniani from Capharnaum*, in *LibAnn*, 9, 1958-1959, p. 283-327, Bastien-Huvelin (P. BASTIEN - H. HUVELIN, *Trésor d'antoniniani en Syrie. La VICTORIA PARTHICA de Valérien. Les émissions d'Aurélien à Antioche et Tripoli*, in *RN*, s. 6, 12, 1969, p. 231-270), and the unusually divergent hoard : Devret (K. BITTEL, *Funde im östlichen Galatien, Römischer Münzschatz von Devret*, in *Istanbulur Mitteilungen*, 6, 1955, p. 27-33).

There is another type formally belonging here, but being a *consecratio*-type, I did not group it into this issue. Although even this type was obviously not minted by Claudius. The only type where *Iupiter* appears together with *Iuno* is the one representing the death and the deification of the emperor.

This emission is even shorter and smaller than the former. The emperor died perhaps already a few weeks after its start. An emperor who during his short reign was in constant warfare against the invading Goths, and had no time to deal with counter-emperors. As an exception, he was not dethroned by a conspiracy of his officers but died of pestilence. Being the most sympathetic within the period of soldier emperors, he became the fictive ancestor of the Constantinus dynasty⁶. Probably these circumstances influenced also Zenobia not to turn openly against him and opened up the possibility, at the same time, to do it in the above mentioned ways.

A short pause followed in the Antiochian coinage, since for Quintillus, who was trusted by his soldiers for a few weeks only owing to the popularity of his brother, this mint did not produce coins. Probably Zenobia felt that it wasn't worth wasting her energies for this emperor. After the first months of Aurelianus' reign the mint started again in Dec. 270, carrying on its former policy even more openly. (Table II : Vabalathus and Zenobia).

TABLE II. ANTIOCHIA.

| | | | | | |
|--------------------------------------|---|---------------------------------------|---|-------------------|---------------------------------------|
| Obv. | DIVO CLAUDIO | VABALATHVS V CR IM D R | IM C VABALATHVS AVG | Obv. | IMP C AVRELIANVS AVG |
| Issue | consecratio | I | II | Issue | I |
| Mark of issue | Rev. type with two deities | Mint marks from A to H in the segment | Asterisk in the field on the left or the right side | Marks of issue | Mint marks from A to H in the segment |
| Constant elements of type sequence | | IMP C AVRELIANVS AVG | AETERNTAS AVG (Sol) IOVI STATORI IVVENTUS AVG (Hercules) VIRTUS AVG (Virtus) AEQVITAS AVG ? | Main type | RESTITVT ORBIS |
| | CONSECR AVG (Iuppiter and Iuno) | | IVNO REGINA | | |
| Additional elements of type sequence | | | | Additional type | CONSERVAT AVG (Sol) |
| | | | | Fragmentary types | RESTITVT.ORBIS SOLI INVICTO |
| Date | Immediately after the death of the emp. Claudius II | December 270-April 272 | April-May 272 | Date | 2nd half of 272-273 |

The type minted in his period is a curiosity in the whole imperial coinage. One side displays the bust of Aurelianus, the other depicts Vabalathus. It is only the officina marks which tell which side was the obverse : the young Palmyran Hercules!

The type represented the same dualistic view as Claudius' last issue but even more openly, nearly questioning the traditions of coinage. The issue lasted long, until Aurelianus, having defeated the Iutungs and the Gallian counter-emperor, set out against Palmyra⁷. This time she put her cards on the table and issued a type series adjusted to the Gallienus traditions containing only Vabalathus' name.

This second issue of the Palmyran emperors is very short containing several debated types, still it clearly reflects the situation. Zenobia also had an obverse as an empress. If it would have been dubious that *Iuno Regina* represented her, now we can be sure. This is the reverse of her single coin. All the other coins had Vabalathus on the obverse. There are also some Gallienus types (by no means Claudian!) together with the

⁶ Scriptores Historiae Augustae : Divus Claudius, 13; Excerpta Valesiana, *Origo Constantini Imperatoris*, I.1.

⁷ For the events of Aurelianus' Iutung war, Dexippos is a contemporary source. (*Die Fragmente der Griechischen Historiker*, ed. Jacoby, 2), p. 456-458.

traditional depiction of *Iuventus Aug* (*Hercules*) as a *Venus Aug* and the two desperate types of a total confrontation before the military defeat : *Victoria Aug* – usually it was the indication of a hopeless situation, and the *Iovi Statori* – the last prayer to Jupiter stopping the enemy, in the Palmyran coinage.

Following Aurelianus' victory, coinage in the Antiochian mint was carried on in a totally different system. The emperor had changed the structure of the propaganda policy prior to the introduction of the coin reform. The varied but for him too voluminous type series were stopped. The subject matter of coinage was restricted to a main and a couple of secondary types (Table II Aurelianus).

I have already published the coinage in Tripolis in this period⁸. In respect of this analysis, the only feature to be mentioned is the relation of the activity of a mint farther off from Palmyra than Antiochia. Did it followed the later's issues or chose another way? This question is underlined by the general experience that shows that the greatest eastern mint served as a standard for the smaller ones.

The first phenomenon to be noted is the counter-trend in the volume of production : the minting in the three Claudian issues in Antiochia shows regressive tendencies, while in Tripolis it is the contrary⁹.

It is also worth noting that while there was no coin minted in Antiochia with Quintillus' name, this shortruling emperor had a coinage in the much smaller Tripolis.

| Mint/issue | I | II | III |
|------------|-----|-----|------------|
| Antiochia | 526 | 97 | pieces |
| Tripolis | 15 | 157 | 333 pieces |

It may be considered even more significant that there is a discrepancy between the subject of coinage in the two mints during Claudius Gothicus (Table III.). In the first issue the small volume of coins allows only the description of the types, the quantity is not sufficient for a frequency analysis. Still, it is obvious that the propaganda of this issue had no eastern affinities. The illustration of the next *PM TRP*-type was the Roman wolf. Perhaps the emperor of Illyrian origin would like to give a stronger emphasis to his Roman being than if he had been born in Italy. Otherwise, this initial Tripolis issue carried on the mythological traditions of Gallienus.

The new tone of actual politics appeared in the second issue of the Claudian coinage. The main phrase : *Victoria Gothica* related to the main task of the emperor during his whole reign, his fight against the Goths. The next constant element, *Fortuna Redux*, the good fortune warranting the return home, was also a military phenomenon which cannot be mixed with the figure of *Fortuna* illustrating *felicitas*. *Pax Aeterna* was a wish for peace for the people oppressed by horrors of war! What is the relation of this coinage to the queen *Iuno*, the young *Hercules* or to the king of arts, *Vulcanus*, produced at the same time in Antiochia?

This coinage in Tripolis was totally different from that in Antiochia. It reflected the main actual problems of the Empire. It did not concentrate on the emperor himself, but if anyhow it did, this happened with dignity. The *Virtus Aug*-types with *tropaeum* or *Virtus* personification are especially attractive in this respect. It is certain that this propaganda policy was created in the direct vicinity of the emperor.

⁸ The History of the SPQR Mint, in *MittArchInst der UAW*, 12/13, 1984, p. 85-111.

⁹ The hoards taken into consideration in connection with minting in Tripolis under Claudius' rule are : Plevna (N.A. MUSMOV, *Les marques secrètes d'ateliers monétaires de Serdica*, in *AnnMNB*, 1922-1925, p. 160-217, Ragevo (M.A. MUSMOV, *Nahodka Rimski Moneti ai III Vek pri Razhevo, Plovdivsko*, in *AnnMNB*, 6, 1932-1934, p. 161-199, Komin (see above n 5), Venera (L.A. MILANI, *Il ripostiglio della Venera*, in *Atti della R. Accademia dei Lincei*, 3, 1880), Canakkale (H.-G. PFLAUM - P. BASTIEN, *La trouvaille de Canakkale (Numismatique Romaine. Essais, recherches et documents*, 4), Wetteren, 1969), finally there are only a few pieces in the Blackmoore – , Fragas de Piago – and the above mentioned Roquefeuil hoards.

TABLE III. TRIPOLIS.

| Obv. | GALLIENVS AVG | CLAVDIVS AVG IMP C M AVR CLAVDIVS AVG | IMP C M AVR CLAVDIVS AVG | IMP C M AVR CLAVDIVS AVG IMP CLAVDIVS AVG IMP CLAVDIVS P F AVG |
|------------------------------------|---|---|--|--|
| Issue | III | Pre-issue | I | II |
| Mark of issue | «D» type sequence SPQR | «B» type sequence SPQR; obv. : drap. bust r. | «B» type sequence SPQR; curr. bust r. | SPQR with globules |
| Constant elements of type sequence | P M TR P XVIII (deer) AEQVITAS AVG VICTORIA AVG VIRTVTI AVG (Amazon) VENVS AVG ABVNDANTIA AVG (Luna) | P M TR PO P P (Lupa romana) AEQVITAS AVG VICTORIA AVG VIRTVTI AVG (Mars) PROVIDENTIA AVG CONSERVAT AVG | P M TRF PO P P MINERVA AVG SALVS AVG VIRTVTI AVG (tropeum) VENVS AVG ROMAE AETERNAE VIRTVTI AVG (Mars) | VICTORIAE GOTHIC FORTVNA REDVX PAX AETERNA VIRTVS AVG |
| Date | after Aug. 268 | End of 268 | Till Aug. 269 | 2nd half of 269 |

The above described manifestations of the propaganda policy raise the question of the independence of the mints. Without believing in a generally valid system it can be stated that coins were minted in an imperial mint with the name of the emperor, which did not mean that the emperor had a total control of the mint. The contradictory phenomena of the propaganda policy may indicate the compromise between power factors, or one's being at the mercy of the other. It may also indicate tactics used by the leader of the mint for the sake of an uninterrupted production.

It seems that making the policy was much more dependent on the mint than the economical problems since the supply of raw materials depended most probably on the influence the mint had on the emperor. It can hardly be expected that precious metals or even bronze would have been offered to an enemy. The cessation of the Antiochian mint during Claudius must have been due to this reason.

The analysed phenomena suggest that under Gallienus there was a coinage in Antiochia directed and controlled by the imperial administration and that it was regularly supplied with raw material and the guidelines of the propaganda policy. The detailed execution of the latter was the task of the leaders of the mint. To enlarge the production and to ease Antiochia, or perhaps even to substitute it, a mint was set up in Tripolis during the reign of this emperor. Claudius also stuck to his rights of coinage in Antiochia and started the production in the same volume as his forerunner. He, however, gradually lost control over the mint even without Zenobia making efforts for it. The result was that the emperor stopped providing raw material to this mint and so production became more and more restricted, its propaganda lost political significance, which implies a suggestion of double power.

These events are characterized by the regular production of the mint. The staff and even the leaders seem to have remained during the political changes. The sign of replacing the carver of the legends, a highly qualified skilled worker, or perhaps the head functionary directing the orthography of the legend, appeared only at the time when the mint openly opposed to Aurelianus¹⁰.

As research connected this change with the Semitic pronunciation of the name «Vabalathus», it may also be supposed that the political change was strengthened with changes in the staff in the Antiochian mint at the peak of the Palmyran influence.

Following Aurelianus' victory the central imperial power took back the control over the mint and did not even allow the definition of the details of the propaganda policy to the local functionaries. This resulted in the simplification of the propaganda activity but ensured at the same time that the ambitions of the emperor would be expressed more directly and unambiguously.

¹⁰ H. SEYRIG, *Vabalathus Augustus*, in *Mélanges offerts à K. Michałowski*, Warsaw, 1966, p. 659-662.

La première émission d'or au nom d'Aurélien à Siscia (270 A.D.)

Sylviane ESTIOT*

Les émissions d'or de l'empereur Aurélien sont mal connues, plus encore que celles des antoniniens : la recherche numismatique depuis plusieurs décennies ne s'est pas occupée de cette période, et c'est un paradoxe pour un règne qui illustre d'un côté la phase ultime de la dislocation du système monétaire romain, mais d'un autre la première étape de sa restauration.

L'ouvrage essentiel de référence reste celui de Theodor Rohde paru il y a plus d'un siècle¹, mais son catalogue des monnaies d'or comporte bien des lacunes et des erreurs de répartition entre ateliers monétaires émetteurs; en outre le savant hongrois n'aborde pas le problème du regroupement des monnaies d'or en émissions, ni celui de leur datation². C'est néanmoins son travail que démarque fidèlement l'auteur du *Roman Imperial Coinage* V/1³. Un peu plus récemment, l'étude du monnayage d'Aurélien a été reprise par F. Manns⁴, qui propose une répartition géographique et chronologique des émissions, mais son ouvrage reste d'une manipulation malaisée en raison de l'absence totale de reproductions photographiques et du fait que son auteur, pour la lisibilité de sa reconstruction historique, éparpille souvent entre plusieurs émissions des monnaies qui n'appartiennent en réalité qu'à une seule⁵.

Il est vrai que le rassemblement des documents est difficile pour cette période où l'or est rare⁶. Nos propres recherches dans les collections et les catalogues de vente nous ont permis de rassembler 28 *aurei* constituant la première émission de métal précieux à Siscia; l'apport du trésor trouvé en Corse se monte à quatre monnaies⁷.

En l'absence, sur les monnaies d'or, de différents d'atelier et de marques d'émission, leur attribution à l'atelier de Siscia et leur datation ne sont possibles que par la comparaison stylistique avec la production conjointe des antoniniens, maintenant mieux connue grâce à l'étude des trésors monétaires⁸.

* Chargée de recherche auprès du CNRS, UMR126/2, Paris.

1 Th. ROHDE, *Die Münzen des Kaisers Aurelianus, seiner Frau Severina und der Fürsten von Palmyra*, Miskolcz, 1881.

2 Th. ROHDE, *op. cit.* Voir les tableaux de l'or, p. 314-319 : Gruppe a. Münzstätte Siscia, Gruppe b. Münzstätte Tarraco, Gruppe c. Münzstätte Antiochia, Gruppe d. Wahrscheinlich nach der Reform in Siscia und Rom geprägt.

3 P.H. WEBB, *The Roman Imperial Coinage* V/1, Londres, 1927.

4 F. MANNS, *Münzkundliche und historische Untersuchungen über die Zeit der Illyrerkaiser-Aurelianus*, Würzburg, 1939.

5 Par exemplaire, les *aurei* que nous regroupons dans la première émission d'or à Siscia se trouvent traités p. 11-12 (1re émission), p. 16 (2e émission) et p. 16-17 (3e et 4e émissions).

6 Pour l'atelier de Siscia sous le règne de Claude n'ont été répertoriés que quatre *aurei*, dont deux provenant du trésor corse, voir H. HUVELIN, *L'atelier de Siscia sous Claude II le Gothique : aurei et deniers*, dans *BSFN*, 40, 10, 1985, p. 723-725 et planche p. 718.

7 Voir J. LAFAURIE, *Trésor d'un navire romain trouvé en Méditerranée*, dans *RN*, s. 6, 1, 1958, p. 79-104; H. HUVELIN et J. LAFAURIE, *Trésor d'un navire romain trouvé en Méditerranée, nouvelles découvertes*, dans *RN*, s. 6, 22, 1980, p. 75-105.

8 Trésor de La Venèra : 3023 antoniniens de Siscia (S. ESTIOT, *Il ripostiglio della Venèra, nuovo catalogo illustrato*, II/1. *Aureliano*, Vérone, à paraître); trésor de Sirmium : 767 antoniniens de Siscia (W. KELLNER, *Ein römischer Münzfund aus Sirmium (Gallienus-Probus)* (TNRB, 7/2), Vienne, 1978).

De ces 28 monnaies d'or, seulement 3 sont répertoriées par Rohde et le *Roman Imperial Coinage* pour l'atelier de Siscia (notre catalogue n°8, 9, 28), 15 autres leur sont connues, mais ont été classées dans la production de l'atelier de Milan, enfin 10 sont inédites dans ces ouvrages de référence (notre catalogue n°1-7, 10-11, 19).

Replaçons tout d'abord cette émission d'or dans son contexte.

Lorsque Claude le Gothique meurt de la peste à Sirmium en août 270, où se trouve Aurélien? Zonaras (Zon., XII, 26) indique que, selon certains historiens, Claude mourant avait désigné Aurélien comme son successeur (ce qui n'implique pas forcément la présence d'Aurélien à Sirmium), mais que selon d'autres sources, c'est Quintille qui avait été appelé à la pourpre par le sénat. À en croire le témoignage de la numismatique, Aurélien paraît bien être resté sur le bas Danube à la tête de la cavalerie romaine pour mettre fin à la guerre gothique, (l'Histoire Auguste, *SHA, Claud.* XII, 4 mentionne d'ailleurs une dernière offensive terrestre des Goths en Thrace et en Mésie Inférieure, à Nicopolis et à Anchialos, sous le règne de Quintille). L'atelier de Cyzique reprend pour la très courte émission de Quintille le type *VICTORIAE GOTHIC(ae)*, un trophée accosté de deux captifs, émis sous Claude II⁹; ce même revers est réutilisé dans la première émission au nom d'Aurélien à la fin de 270 : il tend à prouver la participation d'Aurélien à la victoire gothique et à des succès militaires remportés d'abord sous l'*imperium* de Quintille, puis revendiqués en son nom propre.

De Mésie où l'atteint la nouvelle de la mort de Claude, Aurélien gagne très vite la Pannonie, moins pour contester le pouvoir à Quintille que pour contrer l'invasion vandale. C'est au cours de la campagne qu'il est proclamé empereur par ses troupes, l'atelier de Siscia se met à frapper à son nom après la brève série consacrée à Quintille.

Les Sarmates participèrent-ils à l'offensive en Pannonie aux côtés des Vandales? Les récits les plus complets sont ceux faits par Zosime (Zos., 1, 48), qui parle de Scythes, et Dexippe (Jacoby, *FGH* II, fr.7), qui cite les Vandales. Seule l'Histoire Auguste donne le nom de Sarmates (*SHA, Aurel.*, 18, 2). On a voulu voir cette indication confirmée par le titre de *Sarmaticus Maximus* porté par Aurélien¹⁰; or le dossier épigraphique à ce propos semble assez inconsistant. Sur les trois inscriptions citées par G. Sotgiu, le milliaire de Sofia (*CIL* III, 12333) qui porte les *cognomina* *Sarmaticus* et *Britannicus Maximus* revient en réalité à l'empereur Julien¹¹; l'inscription de Salone (*AE* 1925, 57), où le nom de l'empereur n'est pas conservé, est à regarder avec méfiance, du moment qu'a été écartée l'inscription de Sofia avec laquelle on l'avait mise en parallèle pour l'attribuer à Aurélien. Le dernier témoignage est celui d'une base trouvée en Cappadoce (*CIL* III, 14184³) : elle est bien au nom d'Aurélien, mais la restitution de l'épithète très mutilée de la ligne 3, lue *JARMA*[par son premier éditeur, n'est pas acceptée par tous : Kettenhofen, sans doute à juste titre, préfère y lire *GJERMA[nicus, cognomen ex virtute* courant d'Aurélien, plutôt que *SJARMA[ticus*.

La guerre contre les Vandales dûment terminée par un traité de paix, Aurélien doit rapidement quitter la frontière pannonienne du Danube, pour asseoir son autorité en Italie septentrionale d'une part – les troupes de Quintille entre-temps ont fait défection pour se rallier à lui – et combattre d'autre part les premières bandes d'envahisseurs juthunges¹².

Il est clair que ces premières menaces, signes avant-coureurs d'une invasion massive, ont été sous-estimées par l'empereur qu'on voit davantage préoccupé d'affermir son pouvoir à l'intérieur et de mettre sur pied un programme de gouvernement à partir de

⁹ A. ALFÖLDI, *Die römische Münzprägung und die historischen Ereignisse im Osten zwischen 260 und 270 n. Chr.*, in *Studien zur Geschichte der Weltkrise des 3. Jahrhunderts nach Christus*, Darmstadt, 1967, p. 180 et pl. 58. 8.

¹⁰ G. SOTGIU, *Studi sull'epigrafia di Aureliano*, Sassari, 1961, p. 21-22.

¹¹ E. KETTENHOFEN, *Zur Siegestitulatur Kaiser Aurelians*, dans *Tyche*, 1, 1986, p. 140-141, 144-145.

¹² Dexippe fr. 7.

sa base de Milan: c'est ce que montrent la première émission de billon et le *donativum* d'or qu'il fait battre dans la Monnaie milanaise¹³. Lorsqu'Aurélien réagira, il est déjà trop tard, c'est l'«erreur» qu'indique son biographe lors de la bataille de Plaisance (*SHA, Aurel.*, 18,3) : «Il est vrai qu'Aurélien subit une défaite face aux Marcomans par une erreur de sa part : en effet, tandis qu'il ne se souciait pas de leur faire face dès leur irruption (en territoire romain) et qu'il se préparait à les attaquer sur leurs arrières, toute la région autour de Milan fut gravement dévastée».

Revenons à Siscia et à ses premières émissions. La première émission d'antoniniens et d'or au nom d'Aurélien (octobre 270) porte témoignage du double événement du début de règne, sa proclamation par l'armée et la campagne vandale.

| Aurei | | Antoniniens | | | | | | |
|--------------------|-----------------------------|-------------|--------------|------------------|--------------------------|------|-----|-------|
| | | - | P | S | T | Q | | |
| 1re émission | | | | | | | | |
| PAX AVG | | | Pflaum | | | | | |
| ANNONA AVG | | | LV1 | | | | | |
| LIBERTAS AVG | | LV1 | | Pflaum, Rohde | | | | |
| PROVIDEN AVG | | | | | Rohde, Voetter, BM | | | |
| VBERITAS AVG | | | | | | LV2 | | |
| CONCORDIA MILI | Conc. assise, 2 enseignes | LV 1 | BN, BM, LV 2 | | Rohde, Rohde, | | | |
| | | | Rohde | | Milan Voetter | | | |
| AV CONCORDIA MILI | 2 Conc. debout, 3 enseignes | LV2 | LV10 | LV8 | LV14 | LV12 | LV5 | |
| AV CONCORDIA MILI | Conc. debout, 2 enseignes | LV1 | LV13 | LV11 | LV10 | LV6 | LV1 | |
| CONCORDIA MILI | Conc. debout, 4 enseignes | LV1 | | | BN, Sirmium | | | |
| AV CONCORDI LEGI | Conc. debout, 2 enseignes | | LV1 | | | | | |
| AV VIRTUS AVG | Emp. à cheval, un ennemi | | | | | | | |
| AV VIRTUS AVG | Trophée, 2 captifs | | | | | | | |
| AV VIRTUS AVG VSTI | Trophée, 2 captifs | | | | | | | |
| AV FIDES MILI | | | | | | | | |
| AV FIDES MILITVM | | | | | | | | |
| Total | | LV6 | LV25 | LV21 | LV24 | LV20 | LV6 | LV102 |
| 2e émission | | | | | | | | |
| AV GENIVS ILLVR | | | LV7 | LV9 | LV6 | LV8 | LV2 | LV32 |

La première série d'antoniniens est un ensemble assez complexe : les 4 officines en service depuis la fin du règne de Claude se répartissent 5 types: l'officine P frappe PAX AVG et ANNONA AVG, l'officine S, LIBERTAS AVG, l'officine T, PROVIDEN AVG, la Q, VBERITAS AVG, ces trois derniers revers étant repris de ceux émis par Claude et par Quintille.

L'originalité de l'émission d'antoniniens consiste en la prédominance des types CONCORDIA MILI(*tum*) (97 ex. sur 102 dans le trésor de La Venèra¹⁴), thème de propagande évident qui établit la légitimité du nouvel empereur sur l'unanimité des armées qui l'ont élevé à la pourpre. C'est au même moment que Quintille venu à Aquilée pour affronter Aurélien est acculé au suicide (Zos., 1, 47) par la défection de ses propres troupes. Il faut en voir un écho dans l'apparition du type CONCORDIA MILI où la *Concordia* se fait plurielle : ce sont deux Concordes qui se font face, tenant trois enseignes militaires. Même signification, sous un symbolisme à peine différent, avec le

13 S. ESTIOT, *Or et billon : l'atelier de Milan sous Aurélien (270-274 A. D.)*, dans *Ermanno A. Arslan Studia Dicata II*, Milan, 1991, p. 460-462.
14 ID., *Il ripostiglio della Venèra...II/1 : Aureliano : Siscia, 1re émission*, n°5922-6023.

type CONCORDIA MILI où une Concorde tient, non pas deux, mais quatre enseignes légionnaires. La typologie de l'émission pannonienne sera publiée presque telle quelle en novembre-décembre 270 par l'atelier de Milan, où Aurélien stationnera avant les batailles d'Italie du Nord. La deuxième émission d'antoniniens à Siscia, très courte (32 ex. dans le trésor de La Venèra), ne comporte qu'un seul revers GENIVS ILLVR(*ici*), un type qui célèbre en même temps la province, la Monnaie elle-même, le prince et son armée¹⁵.

Quant à l'émission d'or, elle est d'une tonalité différente. Elle néglige les types sans coloration particulière hérités des prédécesseurs d'Aurélien, pour se concentrer sur les types CONCORDIA MILI : 8 ex. au type des deux Concorde face à face tenant trois enseignes (catal. n°3-10), 1 ex. au type Concorde debout tenant deux enseignes (n°11); CONCORDI LEGI : 3 ex., Concorde tenant deux enseignes (n°25-27) et FIDES MILI/MILITVM : 9 ex., *Fides* tenant deux enseignes (catal. n°13-15, 19, 20-24), en fait la même iconographie que pour CONCORDIA MILI.

Les 6 autres exemplaires célèbrent la *Virtus* guerrière de l'empereur et les succès militaires qu'elle lui vaut au cours de la guerre vandale : on y voit l'Empereur cavalier percer de sa lance un ennemi terrassé, VIRTVS AVG (catal. n°1), ou bien un trophée accosté de deux captifs barbares, VIRTVS AVG/AVGVSTI (catal. n°2, 16-18). Enfin, un *aureus* illustre le type GENIVS ILLVR propre à la 2e émission d'antoniniens (catal. n°28, voir Pl. IV, antoninien f).

Pour le billon, des titulatures de longueurs variées sont utilisées en même temps; pour l'or, les deux titulatures le plus souvent utilisées sont IMP C D AVRELIANVS AVG et IMP C AVRELIANVS AVG. Une seule exception, notre n°10, un *aureus* provenant du trésor corse: lue CAES L DOM AVRELIANVS AVG dans la description du catalogue de vente, il faut la compléter en IMPJ CAES L DOM AVRELIANVS AVG, par analogie avec la titulature qu'on rencontre sur le billon, mais surtout parce que se lit encore sous le buste, devant CAES, la base des deux lettres MP.

Les bustes sont des bustes drapés, vus de face, ou plus rarement de trois quarts dos.

Une belle série de bustes cuirassés portant un pan d'égide étalé sur l'épaule gauche (catal. n°19-28) est émise à partir d'un seul et même coin de droit **D12**. Sa contemporanéité avec les bustes drapés est assurée par notre monnaie n°19, qui relie par le même coin de revers **R13** buste cuirassé et bustes drapés (catal. n°13-15). D'autre part le buste cuirassé avec pan d'égide, mais bien sûr radié, apparaît sur des antoniniens appartenant à la première émission de billon (voir Pl. IV, antoninien e). Notons d'ailleurs que ce buste bien caractéristique a fait son apparition sous le règne de Claude II, où on le trouve déjà à la fois sur des antoniniens¹⁶ et sur un *aureus*¹⁷.

Il nous faut nous attarder un peu plus longuement sur trois *aurei*.

L'*aureus* catal. n°1 est un *unicum* qui appartient aux collections de Copenhague, il présente au revers, avec la légende VIRTVS AVG, une scène guerrière où l'empereur à cheval perce de sa lance un ennemi à terre. La monnaie n'est recensée ni par Cohen, ni par Rohde, ni par le *RIC*; F. Manns la cite et indique à juste titre que ce revers existe aussi pour les antoniniens¹⁸. Il existe effectivement deux antoniniens au même revers : ils présentent en outre la caractéristique intéressante d'avoir été frappés avec le même coin de revers que l'*aureus* (voir Pl. IV, n°1 et antoniniens a et b). Comme le revers est sans marque, on peut supposer que c'est le coin destiné à l'or qui a été utilisé pour le billon.

L'*aureus* n°10 est lui aussi inconnu des ouvrages de référence, il porte les traces de fusion qu'on retrouve sur d'autres monnaies du trésor corse dont il provient. Nous avons

15 ID., *Il ripostiglio della Venèra...* II/1 : Aureliano : Siscia, 2e émission, n°6024-6055.

16 A. ALFÖLDI, *Siscia. Vorarbeiten zu einem Corpus der in Siscia geprägten Rötermünzen II : Die Prägungen von Claudius II. und Quintillus*, dans *NK*, 34-35, 1935-1936, pl. IV, 12-13.

17 H. HUVELIN, *L'atelier de Siscia...*, pl. 6, p. 718.

18 F. MANNS, *op. cit.* p. 11.

indiqué plus haut comment il fallait restituer la titulature sur l'avvers abîmé par la chaleur. Au revers, la fonte de la monnaie a affecté le haut de la légende ainsi que l'exergue, mais on peut pourtant distinguer le haut de la lettre qui y figurait, et qui est un S. Le coin de revers qui a servi à la frappe de l'*aureus* était donc prévu à l'origine pour l'émission d'antoniniens. Nous en avons une confirmation bienvenue grâce à un antoninien du trésor de La Venèra¹⁹ (Pl. IV, antoninien c) qui est issu du même coin de revers que notre *aureus* n°10.

L'*aureus* n°11 est le seul *aureus* radié de l'émission. La pièce se trouve au Musée des Beaux-Arts à Lyon où elle est entrée en 1855 avec le legs Jean Bonaventure Rougnard²⁰. Elle non plus ne figure pas dans les ouvrages de référence, mais elle se trouve décrite et gravée dans un article du Lyonnais Paul Dissard (mais sans commentaire d'aucune sorte) paru dans la *Revue Belge de Numismatique*²¹.

Malgré la couronne radiée, il ne s'agit pas d'un *binio*, comme il est aisé de le déduire de son module et de son poids, 2,93g. En fait, les monétaires pannoniens ont, pour la frappe de cette monnaie d'or, tout simplement utilisé des coins destinés au billon. On peut le supposer sans grand risque d'erreur pour le coin de revers, qui porte dans le champ droit la marque d'officine P réservée au billon argenté; mais c'est un fait avéré pour le coin de droit : nous avons, dans ce cas aussi, eu la chance de retrouver un antoninien issu du même coin de droit (voir Pl. IV, n°11 et antoninien d). Il s'agit d'un antoninien appartenant à la collection Pflaum, émis de même dans la première officine (P dans le champ droit). Notons en outre que l'antoninien Pflaum est à son tour inédit, son revers PAX AVG ne figurant ni dans Cohen, ni dans Rohde, ni dans le *Roman Imperial Coinage*.

Nous avons ainsi trois cas clairs de l'utilisation indifférenciée des coins pour la frappe de l'or et du billon : pour l'*aureus* n°1, dans le sens or → billon²², pour les *aurei* n°10 et 11, dans le sens billon → or²³. L'urgence de la situation, la nécessité d'émettre rapidement l'argent des soldes et l'or des largesses récompensant la loyauté des armées, favorisent le recours à une pratique économique en temps et en main d'œuvre.

Le poids moyen des 28 monnaies d'or, dont beaucoup sont trouées, s'établit à 4,11g (78 à la livre), une taille un peu faible si on lui compare celle des *aurei* milanais contemporains, 4,53g, environ 1/72 de livre²⁴.

CATALOGUE

- | | | |
|---|------------|--|
| 1 | D 1 | IMPC D AVRE-LIANVS AVG Buste lauré, drapé à droite. |
| | R 1 | VIRTVS AVG L'empereur à cheval au galop à droite, perçant de sa haste un ennemi allongé, coude en terre Cohen - ; Rohde - ; RIC - Copenhague; 4,92g* |
| 2 | D 1 | Idem. |
| | R 2 | VIRT-VS AVG Un trophée accosté de deux captifs assis, mains liées derrière le dos. Cohen - ; Rohde - ; RIC - RN, s. 6, 1, 1958, n°36 = RN, s. 6, 22, 1980, n°55 (trésor corse); 5,64g* |

19 S. ESTIOT, *Il ripostiglio della Venèra... II/1 : Aureliano*, n°5942.

20 Je dois ces renseignements à l'amabilité de F. Planet, chargé de la conservation du médaillier de Lyon.

21 P. DISSARD, *Quelques médailles romaines inédites*, dans *RBN*, 36, 1880, p. 64, n°18, pl. VI.

22 Comme c'était le cas pour un «denier» émis sur des coins d'or sous Claude II : H. HUVELIN, *L'atelier de Siscia...*, p. 723, pl. 4 et 5.

23 Un exemple aussi sous le règne de Claude, *Ibidem*, p. 723-724, pl. 9.

24 S. ESTIOT, *Or et billon : l'atelier de Milan...*, p. 487-490.

3. **D 2** IMP C D AVRE-LIANVS AVG Buste lauré, drapé à droite.
 R 3 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen - ; Rohde - ; *RIC* -
 RN, s. 6, 1, 1958, n°35 = *RN*, s. 6, 22, 1980, n°56 (trésor corse); 3,69g*
4. **D 2** Idem.
 R 4 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen - ; Rohde - ; *RIC* -
 Dans le commerce en 1981 (trésor corse); 3,78g*
5. **D 3** IMP C D AVRE-LIANVS AVG Buste lauré, drapé à droite.
 R 5 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen - ; Rohde - ; *RIC* -
 Vente Ars Classica XIII, 27-29.VI.1928, n°1507 = *Vente Monnaies et Médailles* 15, 1-2.VII.1955, n°838 = *Coll. Mazzini* IV, 1957, n°49 = *Vente Leu* 13, 29-30.IV.1975, n°485, 5,06g*
6. **D 4** IMP C D AVREL-IANVS AVG Buste lauré, drapé à droite.
 R 6 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen - ; Rohde - ; *RIC* -
 Budapest (trouvé à Komitat Baranya); 3,80g*
7. **D 5** IMP C D AVREL-IANVS AVG Buste lauré, drapé à droite.
 R 7 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen - ; Rohde - ; *RIC* -
 Vente Leu/Monnaies et Médailles 2-3.XI.1967, n°1459 (coll. Walter Niggeler, 3); 2,98g*
8. **D 6** IMP C AVRE-LIANVS AVG Buste lauré, drapé à droite.
 R 8 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen 49 (cet exemplaire); Rohde 9; *RIC* 167
 BN 1465; 3,93g*
9. **D 6** Idem.
 R 9 CONC-ORDIA MILI Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen 49; Rohde 9; *RIC* 167
 Vienne; troué; 4,43g*
10. **D 7** IMP] CAES L DOM AVREL-IANVS AVG Buste lauré, drapé à droite.
 R 10 CONCO-R-DI-A MIL à l'exergue, S. Deux *Concordiae* affrontées, tenant trois enseignes.
 Cohen - ; Rohde - ; *RIC* -
 Vente Vinchon 15.XI.1986, n°37 (trésor corse); 3,30g*
11. **D 8** IMP C AVREL-IANVS AVG Buste radié, drapé à droite.
 R 11 CONCO-RDI-A MIL dans le champ droit, P. *Concordia* debout à gauche, tenant deux enseignes.
 Cohen - ; Rohde - ; *RIC* -
 Lyon; 2,93g*
12. **D 9** IMP C AVREL-IANVS AVG Buste lauré, drapé à droite.
 R 12 VIRTVS AV-GVSTI *Virtus* marchant à droite, tenant une haste en avant et un trophée sur l'épaule gauche.
 Cohen -, Rohde 51 (classé à Tarraco = Milan, cet exemplaire); *RIC* 98 (classé à Milan, cet exemplaire)
 Budapest; troué; 3,50g*
13. **D 10** IMP C D AVREL- IANVS AVG Buste lauré, drapé à droite, vu de dos.
 R 13 FID-ES MILI *Fides* debout à gauche, tenant deux enseignes.
 Cohen 79 (cet exemplaire) Rohde 12 (buste mal décrit, classé à Tarraco = Milan), *RIC* 89 (classé à Milan)
 BN 1467; 3,98g*



- 14-15. **D 11** IMP C AVRELIANVS AVG Buste lauré, drapé à droite, vu de dos.
R 13 Idem.
 Cohen 80; Rohde 13 (classé à Tarraco = Milan); *RIC* 90 (classé à Milan)
 Vienne; troué; 4,35g*
 Coll. Ponton d'Amécourt, 1887, n°561 = Vente Feuardent 1909, n°263 = Vente Vinchon, 6-7.V.1955, n°416 = Vente Lanz 1, 8-9.XII.1972, n°289, trou rebouché; 4,42g*
- 16-18. **D 11** Idem.
R 14 VIRTVS AVG-VSTI Un trophée accosté de deux captifs assis, mains liées derrière le dos.
 Cohen 278; Rohde 50 (classé à Tarraco = Milan); *RIC* 99 (classé à Milan)
 BN 1478; 3,57g*
 Vente Ars Classica 17, 3.X.1934, n°1784, trou rebouché; 4,75g
 Vienne (coll. Rohde); 4,87g*
19. **D 12** IMP C AVRELI -ANVS AVG Buste lauré, cuirassé à droite, un pan d'égide revient sur l'épaule gauche.
R 13 FID-ES MILI *Fides* debout à gauche, tenant deux enseignes (comme n°12, 13 et 14)
 Cohen - ; Rohde - ; *RIC* -
 BN (coll. Rothschild n°497); troué ; 4,27g*
- 20-24. **D 12** Idem.
R 15 FIDES MILITVM *Fides* debout à gauche, tenant deux enseignes.
 Cohen 84; Rohde 17 (classé à Tarraco = Milan); *RIC* 93 (classé à Milan)
 Karlsruhe; 3,89g*
 Saint-Pétersbourg; 4,39g*
 Berlin = coll. Elberling, 1868 = coll. de Moustier, n°3396 troué, 4,69g*
 Vente Feuardent, 1913 (coll. Jameson II), n°288 = Vente Hess 5.IV.1955, n°135 =
 Vente Sternberg 14, 24-25.V.1984 n°434, trou rebouché, 3,06g
 Vente Hess-Leu, 9.V.1951, n°259, troué, 5,01g
- 25-27. **D 12** Idem.
R 16 CONC - ORDI LEGI *Concordia* debout à gauche, tenant deux enseignes.
 Cohen 27 (l'ex. de Paris, buste mal décrit), Rohde 10 (l'ex. de Paris, buste mal décrit, classé à Tarraco = Milan), *RIC* 86 (classé à Milan)
 BN 1466, troué, 3,74g*
 Vienne, troué, 4,00g*
 Vente Monnaies et Médailles 8, 8-10.XII.1949, n°959, troué, 3,86g
28. **D 12** Idem.
R 17 GENIVS ILL-VR *Genius* debout à gauche, tenant une patère et une corne d'abondance; derrière lui, à droite, une enseigne.
 Cohen 102 (cet exemplaire); Rohde 22 (cet ex.); *RIC* 173 (cet ex.)
 Vienne (coll. Rohde), trou rebouché, 4,15g*

Un «ripostiglio» di medaglioni romani

Patrizia CALABRIA*

Vorrei ricordare la scarsità di notizie¹ sui ritrovamenti di medaglioni. Per l'oro abbiamo ritrovamenti sporadici, 5 nelle province di lingua greca, 14 in quelle di lingua latina, 4 in Egitto e 5 in Italia. Si conoscono inoltre 9 ritrovamenti²: quello di Velp (NL) del 1715, di Helleville (F) del 1780, di Szilägy-Sómylyó (ROM) del 1797, di O-Szőny (HU) del 1885 già citati dallo Gneecchi; e inoltre quello di Borča (YU) del 1879, di Morenhoven (D) del 1880, di Arras³ (F) del 1922, di Lubiana⁴ (l'antica Emona in Jugoslavia) della fine del XIX secolo ed infine un ripostiglio⁵ ritrovato in una nave romana lungo le coste della Corsica nel 1956.

A Roma è stato ritrovato un medaglione di Carino sul Campidoglio nel 1902, attualmente conservato al Museo Nazionale Romano, ed ad Albano Laziale, tra il 1900 ed il 1910 sono stati rinvenuti due esemplari della collezione Mazzini⁶, uno di Teodosio e l'altro di Libio Severo.

Per l'argento conosciamo due esemplari provenienti dalle province; inoltre abbiamo notizie di 4 medaglioni rinvenuti in diverse catacombe a Roma e di un ricco ripostiglio scoperto nel 1949 a San Genesio⁷ (prov. di Pavia).

Per il bronzo abbiamo una maggior quantità di ritrovamenti: circa 50 nel territorio dell'impero, provenienti per la maggior parte dai territori dell'est, pochi dall'Italia tra cui uno scoperto ad Ostia nel 1917.

A Roma ne sono stati ritrovati 15 nelle catacombe di: Panfilo, Domitilla, Calepodio e Verano. Da diversi scavi provengono 22 esemplari del II secolo, 6 del III secolo, due di Massimiano ed uno di Costanzo II. Sul monte della Giustizia, nei pressi della Stazione Termini, sono stati ritrovati 4 esemplari ora conservati⁸ nei Musei Capitolini e presentano un unico numero d'entrata.

Sono: un esemplare di Adriano, uno di Faustina II, uno di Lucio Vero ed uno di Elagabalo. Sono stati tutti restaurati e ritengo che i rimaneggiamenti e le aggiunte nelle

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Vorrei dedicare questo intervento alla signora Maria Panvini Rosati che ha riordinato e schedato la maggior parte del materiale conservato al medagliere capitolino avendovi lavorato gratuitamente per un lungo periodo di tempo. Per mezzo dei suoi appunti e delle sue note stiamo cercando di verificare le provenienze di tutto il materiale conservato nel medagliere, utilizzando anche scritti e note di C. Serafini e S.L. Cesano conservati negli archivi capitolini ed in altri archivi. Ringrazio altresì la direzione e la Conservatrice del Museo per la loro grande disponibilità.

1 Per le notizie in generale sui ritrovamenti: J.M.C. TOYNBEE, *Roman Medallions* (*Numismatic Studies*, 5), New York, 1986.

2 Per uno schema generale sui medaglioni ritrovati nei 9 ripostigli vd. Tav. I.

3 Pubblicato da P. BASTIEN, C. METZGER, *Le trésor de Beaurains (dit d'Arras)* (*Numismatique Romaine. Essais, recherches et documents*, X), Wetteren, 1977.

4 Pubblicato da J. LAFAURIE, *Trésor d'un navire romain trouvé en Méditerranée*, in *RN*, s. 6, 1, 1958, p. 79-104. Vd. Tav. II e Tav. III.

5 Pubblicato da A. JELOČNIK, *Les multiples d'or de Magnence découverts à Emona*, in *RN*, s. 6, 9, 1967, p. 209-235. Vd. Tav. IV.

6 Collezione Mazzini G. MAZZINI, *Monete imperiali romane*. 5 vol., Milano, 1957-1958.

7 Pubblicato da O. ULRICH-BANSA, *S. Genesio (Pavia). Ripostiglio di monete d'argento del IV secolo d.C.*, in *NotScavAnt*, s. 8, 8, 1954, p. 166-185. Vd. Tav. V.

8 Già pubblicati da F. GNECCHI, *I medaglioni romani*, I-III, Milano, 1912.

immagini e nelle leggende, siano dovuti ad un incauto restauro piuttosto che ritenere i medaglioni falsi in toto.

Nei Musei Capitolini sono presenti altri medaglioni e, fra questi, 8 (non troppo ben conservati) presentano tutti la medesima patina. Questi fanno parte di materiale «monetario e monetiforme esumato dagli scavi al Foro di Augusto e nella massima quantità dallo spurgo delle fogne del medesimo. L'insieme di questo materiale somma a più di 1600 pezzi», ciò si legge in una nota trovata tra i documenti del Museo tra gli anni trenta e quaranta.

Tra questo materiale sono riconoscibili 6 bronzi e 9 monete d'argento della repubblica ben conservate; altri 620 esemplari di bronzo sono divisi tra tutti gli imperatori. I nuclei di maggior consistenza contengono monete coniate durante il regno dei seguenti imperatori : Augusto, Adriano, Gordiano Pio e Costantino.

Sono presenti inoltre 6 monete alessandrine, 11 imperiali greche, 13 bizantine, 9 gotiche, 2 tessere enee, 12 plumbee, 30 contornati e 73 monete con gli orli ribattuti. Di queste ultime due categorie alcuni esemplari sono stati pubblicati nell'ultima edizione del corpus dei contornati curato da A. Alföldi e E. Rosenbaum⁹. Fanno parte di questo materiale anche due monete d'oro di ottima conservazione, una di Costanzo II con i vota XX multa XXX a sul R/ il tipo di Roma e Costantinopoli coniata a Tessalonica, a l'altra di Giuliano II il filosofo con al D/ uno splendido ritratto ed al R/ Costantinopoli e Roma che sorreggono uno scudo, della zecca di Antiochia. Non sono presenti monete d'argento del periodo imperiale; quello che potrebbe esserci stato o meglio che si sarebbe dovuto trovare è stato probabilmente distrutto essendo questo metallo più facilmente attaccabile dagli acidi dell'ambiente. Ciò si dovette verificare soprattutto per i billoni di III secolo di cui non vi è traccia in questo rinvenimento ricco ma non omogeneo. Vorrei ribadire che il rinvenimento è stato consegnato in maniera unitaria ma le monete sono state ritrovate in un ampio spazio, probabilmente a gruppi e in diverse situazioni, dati per altro solo ipotizzabili.

Tutto il materiale leggibile fu classificato dividendolo in buono e leggibile ed immesso nella collezione capitolina senza un chiaro riferimento alla provenienza; il materiale ammontava a 830 pezzi, quindi la metà circa, era costituito, sempre secondo la nota, di «tondelli amorfi, rigonfi, spugnosi, friabili che non hanno più nessuna consistenza metallica e su cui è scomparsa ogni minima traccia di conio, in quanto la superficie è alterata, conpenetrata di incrostazioni e terriccio da far scomparire ogni traccia monetale».

Abbiamo identificato quasi tutte le monete ed in pubblicazione sarà dato l'elenco con i numeri d'inventario delle monete imperiali in tavole. Per quanto riguarda i medaglioni o pseudomedaglioni in questione, li abbiamo identificati fra tutti quelli conservati al Museo e sono :

1. NERONE

D/ NERO CLAVDIVS CAESAR AVG GER P M TR P IMP P P Testa laureata volta a d., sotto un globo.

R/ S C Arco di trionfo. Sulla sommità Nerone in quadriga tra due figure stanti identificabili con la Pace e la Vittoria; tra le colonne a s. la statua di Marte con asta e scudo.

Peso : 61.22g; ø : 44 mm.

2. SEVERO ALESSANDRO

D/ IMP SEV ALEXANDER AVG Busto dell'imperatore laureato, drap. e coraz.

R/ P M TR P VIIII COS III PP Alessandro Severo seduto su sella curule con vittoria e lo scettro.

Dietro a lui una Vittoria e davanti la Virtus galeata vicino uno scudo iscritto Vota X su un cippo.

Il medaglione è a due metalli.

Peso : 36,80g; ø : 35/37 mm.

⁹ A. ALFÖLDI, A. ALFÖLDI, C.L. CLAY, *Die Kontorniat-Medallions (DAI. Antike Münzen und geschnittene Steine*, 6, 1-2), Berlino, 1976.

3. FILIPPO Padre

D/ IMP CAES M IVL PHILIPPVS AVG Busto laureato e drappeggiato.

R/ P M TR P COS PP Filippo tra due soldati che reggono insegne. L'imperatore è stante in abiti militari.

La conservazione è ottima. Peso : 43,80g; \varnothing : 35 mm.

4. TRAIANO DECIO

D/ IMP C M Q TRAIANVS DECIVS AVG Busto corazzato e paludato a d.

R/ VICTORIA AVG S C Vittoria in movimento con corona e palma.

Peso : 40,60g; \varnothing : 18/19 mm.

5. GALLIENO

D/ IMP GALLIENVS AVG COS V Busto laureato a d.

R/ MONETA AVG Le tre monete stanti con bilancia e cornucopia. Ai loro piedi mucchietti di monete.

Peso : 22,42g; \varnothing : 31/32 mm.

6. COSTANTE

D/ D N CONSTANS AVG Busto laureato e drappeggiato.

R/ GLORIA ROMANORVM Pezzo mal conservato, poco leggibile.

Peso : 21,80g; \varnothing : 33/34 mm.

7. COSTANTINO

D/ CONSTANTINOPOLIS Busto femminile galeato a s.

R/ VICTORIA AVGG NN Vittoria turrita seduta con lauro e cornucopia.

Peso : 29,30g; \varnothing : 33 mm.

L'ottavo medaglione che secondo le indicazioni sarebbe dovuto essere di Aureliano e Severina, rintracciato nella collezione, si è rivelato, pesando 13g con un diametro di 24 mm, più un dupondio che un medaglione.

Mi è sembrato opportuno dare notizia dettagliata di questo rinvenimento perché esso, pur non potendo essere considerato un ripostiglio, fa parte del materiale sporadico rinvenuto nel Foro di Augusto e costituisce un raro esempio di un piccolo gruppo di medaglioni di età diverse, rinvenuti in uno stesso luogo. E questo rinvenimento, come altri rinvenimenti sparsi di medaglioni romani, può dimostrare che, nonostante l'importanza di questi pezzi nei confronti della moneta di normale circolazione, essi erano soggetti alla norma dello smarrimento in antico come in età medievale e moderna. Prova ne è il luogo dove i pezzi sono stati rinvenuti, che doveva essere di grande frequentazione.

Vorrei infine specificare che, nel gruppo considerato ho inserito anche il bronzo di Nerone che, per il suo peso eccedente (più del doppio di un sesterzio) non può essere considerato una normale moneta. Sarei propensa a ritenerlo o una prova di conio o un esemplare eseguito come modello per la coniazione.

TAV. I. APPENDICE (A CURA DI C. ANGELETTI).

| Luoghi di ritrovam. e dat. | (NL) Velp | (F) Helle- ville | (ROM) Szilágy- Sómllyó | (YU) Borča | (D) Morenhoven | (HU) Ó-Szöny | (YU) Emona | (F) Beaurains | (F) Coste Corsion |
|-------------------------------|--------------|------------------------|------------------------------|---------------|-------------------|-----------------|---------------|------------------|-------------------------|
| | 1715 | 1780 | 1797 | 1879 | 1880 | 1885 | fine XIX sec. | 1922 | 1956 |
| Autorità emittenti | | | | | | | | | |
| Claudio il Gotico | | | | | | | | | 6 |
| Dioclez. Massimiano | | | 1 | | | 1 3 | | 4 3 | |
| Costanzo Cloro | | | | | | | | 10 | |
| Galerio | | | | | | | | 1 | |
| Costantino | | 9 | 1 | 13 | | | | 3 | |

TAV. II-III. EMONA (LUBIANA) : MULTIPLI D'ORO DI MAGNENZIO SCOPERTI AD EMONA.

Data del ritrovamento : 18 agosto 1956

Totale del complesso monetale : 13 multipli d'oro

Cronologia regno di Costante e Magnenzio

1. MULTIPLO da 3 solidi

TESSALONICA 342-343

D/ D N COSTANS MAX AVGVSTVS Busto di fronte corazzato con paludamento. Testa diadematata volta a s. La mano s. sostiene il globo ed il braccio d. è alzato in segno di saluto.

R/ VICTORIAE DD NN AVGG Due Vittorie in piedi volte l'una verso l'altra sostengono insieme una corona con l'iscrizione : VOTIS/X/MVLTIS/XX In esergo : TES

Peso : 13,44g.

Bibl.: *RN*, 1967, p. 213 n. 1.

2. MULTIPLO da 3 solidi

AQUILEIA marzo 350

D/ IMP CAES MAGNENTIVS AVG Busto corazzato con paludamento a d. Testa nuda.

R/ LIBERATOR REI PVBLICAE Magnenzio nimbato veste un mantello che scende dietro di lui. Monta un cavallo con briglie e ornamenti da parata. Una donna con corona turrita sulla testa, le va incontro inchinandosi in segno di riverenza. Tiene nella destra un corno della abbondanza, mentre con tutte e due le mani si trattiene il velum. In esergo : SMAQ

Peso : 13,46g.

Bibl.: *RN*, 1967, p. 214.

3. MULTIPLO da 3 solidi

AQUILEIA marzo 350

D/ e R/ come n. 2. Le figure del R/ sono più piccole. In esergo : SMAQ

Peso : 13,45g.

Bibl.: *RN*, 1967, p. 214 n. 3.

4-8. MULTIPLI da 3 solidi

AQUILEIA marzo 350

Conio di dritto e di rovescio come n. 2

Pesi : 4. coll.priv.; 5. 13,52g; 6. 13,35g; 7. 13,45g; 8. 13,35g.

9. MULTIPLO da 2 solidi

AQUILEIA marzo 350

D/ IMP CAES MAGNENTIVS AVG Busto corazzato con paludamento.

R/ VIRTVS AVGVS TI NOSTRI Magnenzio avanzante in abiti militari a d. Con la sinistra tiene uno scudo ed un'asta volta verso il terreno; con la destra trascina per i capelli un prigioniero barbuto che ha le mani legate. In esergo : SMAQ

Peso : 9,06g.

Bibl.: *RN*, 1967, p. 215 n. 9.

10. MULTIPLO da 3 solidi

AQUILEIA inizio 351

D/ D N MAG MAGNE NTIVS PF AVG Busto in abito consolare a d. La testa è nuda.

R/ LIBERATOR REI PVBLICAE Come n. 2. Le figure sono più piccole. In esergo : SMAQ

Peso : 13,43g.

Bibl.: *RN*, 1967, p. 215 n. 10.

11. MULTIPLO da 2 solidi

AQUILEIA inizio 351

D/ D N MAGNEN TIVS P F AVG Busto in abito consolare a d. La testa è nuda.

R/ VIRTVS AVGVSTI NOSTRI Come n. 9 In esergo : SMAQ

Peso : 9,13g.

Bibl.: *RN*, 1967, p. 215 n. 11.

12.-13. MULTIPLO a 3 solidi

AQUILEIA inizio 352

D/ D N MAGNEN TIVS P F AVG Busto corazzato con paludamento a d. La testa è nuda.

R/ LIBERATOR REI PVBLICAE Come n. 2 In esergo : SMAQ

Peso : n. 12. 13,67g; n. 13. 13,53g.

Bibl.: *RN*, 1967, p. 215 h.12 e n. 13.

TAV. IV. CORSICA LUNGO LE COSTE NEL MEDITERRANEO. TESORO DI UNA NAVE ROMANA.

Data del ritrovamento : fine XIX secolo

Totale del complesso monetale : 41 monete d'oro

Nominali : 6 multipli e 35 aurei

Cronologia : regno di Gallieno, Claudio il Gotico, Quintillo e Aureliano.

MULTIPLO D'ORO :

1.-4.

MILANO 268-270

D/ IMP C M AVRL CLAVDIVS P F AVG Busto corazzato e diademaco a d.

R/ CONCORDIA EX ERCITVS La concordia vista di fronte che tiene due insegne sormontate da un'aquila.

Peso : 1. 39,35g; 2. 38,85g; 3. 38,80g; 4. 38,65g.

Bibl.: *RN*, 1958, p. 101 nn. 7-10.

5.-6. MILANO 268-270

D/ Come sopra.

R/ Stesso tipo e leggenda di sopra. La concordia ha però la gamba destra curva.

Peso : 38,60g e 38,26g.

Bibl.: *RN*, 1958, p. 101 nn. 11-12

Per il conio di rovescio vedi Gneccchi Tav. III n. 8.

TAV. V. S. GENESIO (PAVIA). RIPOSTIGLIO DI MONETE D'ARGENTO DEL IV SECOLO.

Data del ritrovamento : febbraio 1949

Totale del complesso monetale; 495 monete (1 d'oro e 494 d'argento)

Moneta d'oro : solido di Costanzo II (323-361) coniato a nome di Costantinopoli. R/ Vota XXX soluta et XXXX suscepta (352)

Monete d'argento : 8 multipli di 6 silique; 90 miliarensi o doppie silique; 396 silique.

Multipli di 6 silique

| | AQUILEIA | COLONIA TREVERORUM | SISCIA | ROMA |
|-----------------|----------|--------------------|--------|------|
| VALENTE | | 2 | 2 | |
| GRAZIANO | 1 | | | |
| VALENTINIANO II | 1 | | 1 | |
| TEODOSIO | | | | 1 |

Mythological Depictions on the Contorniates : An Insight into Ancient Die-Artists at Work

Michael R. JENKINS*

Arguable the most curious class of Roman Imperial numismatic pieces, the contorniates, can be differentiated from officially produced coins and medallions by several characteristics – they were usually made of thin brass, smaller in size than the medallions, and display circular furrows («contorni») around the edge of their flans. The generally poor workmanship reflected by the pieces in regard to iconographical errors, the incongruous combinations of unrelated obverse and reverse types, and errors in titular legends suggest that, as noted by Stevenson¹ and Toynbee², the contorniates were not produced at the *officinae* of the mint. While Alföldi disputed this conclusion³, extreme carelessness such as proclamation of emperor **NERD** (sic) **CLAUDIVS CAESAR**'s⁴ titles suggests an «unofficial» workshop was employed for their production. The date of contorniate manufacture is similarly debatable – c. A.D.350 being the most favoured at present for the commencement of their production, and the City of Rome the most likely place of their creation. Lacking contemporary imperial portraits and accompanying legends, the absolute dating of individual contorniates is not possible. Alföldi's relative chronology, based on his observations that obverse and reverse types were used sequentially, while not encompassing cast examples or pieces with unique obverse or reverse types, has provided a most useful framework for discussion⁵. His findings suggest that contorniates were created in two major periods, the «First Great Striking» between the reigns of Constantius II and Theodosius I, the «Second» between c. 410-467/472. The subject matter of the reverse-designs of many examples; horse-races, gladiatorial combats, dramatic performances, and the commemoration of emperors such as Nero and Hadrian who were remembered for their support of such games, would seem to indicate a connection between the contorniates and the celebration of *ludi*. The exact nature of this connection remains unclear – suggestions have ranged from the contorniates being employed as entrance-tickets, prizes, tokens, mementoes⁶, and as argued by Alföldi, an anti-Christian propaganda device used by the aristocracy⁷. Whatever their original purpose, it would seem that in practice the contorniates may have ended up being used as «men» for a board game

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1 S.W. STEVENSON, *A Dictionary of Roman Coins, Republican and Imperial*, London, 1889, p. 227.

2 J.M.C. TOYNBEE, Reviews and Discussions : A. ALFÖLDI, *Die Kontorniaten.*, in *JRS*, 35, 1945, p. 116.

3 A. ALFÖLDI, *Die Kontorniaten : ein verkanntes Propagandamittel der stadtrömischen heidnischen Aristokratie in ihrem Kampfe gegen das christliche Kaisertum*, Budapest, 1943.

4 For example see A. ALFÖLDI, E. ALFÖLDI, C.L. CLAY, *Die Kontorniat-Medallions* (DAI. Antike Münzen und geschnittene Steine, 6, 1-2), Berlin, 1976, p. 61, Nos. 195-198.

5 *Ibidem*, p. 217-232.

6 See S.W. STEVENSON, *op. cit.*, p. 227; F. GNECCHI, *Roman Coins : Elementary Manual*, London, 1903, p. 186-190; K.A. MCDOWALL, *Contorniates and Tabulae Lusoriae*, in *NC*, s. 4, 6, 1906, p. 232-245; H. DRESSEL, *Fünf Goldmedaillons aus dem Funde von Abukir* (*Philos.-histor. Abh.*), Berlin, 1906, II), p. 60; G. MACDONALD, *Roman Contorniates in the Hunterian Collection*, in *NC*, s. 4, 9, 1909, p. 19; J.M.C. TOYNBEE, *Roman Medallions* (*Numismatic Studies*, 5), New York, 1986, p. 234; T.O. MABBOTT, *Notes on Contorniates and «Protocontorniates»*, in *Studies Presented to David Moore Robinson II*, Missouri, 1953, p. 248-250; and L. SACHERO, *Sui «contorniatei»*, in *Numismatica*, 1964, p. 8-17.

7 A. ALFÖLDI, *A Festival of Isis in Rome under the Christian Emperors of the IVth Century*, Budapest, 1937, p. 9-41; A. ALFÖLDI (above n. 3), p. 48-57; A. ALFÖLDI, *Die Kontorniat-Medallions* (DAI. Antike Münzen und geschnittene Steine Teil 2), Berlin, 1990, p. 25f.; and B. KAPOSSY, *Römische Medaillone und Kontorniaten*, in *JBernHistMus*, 51-52, 1971-1972, p. 129.

played on the *Tabulae Lusoriae*, such as those which now decorate the floor of the Basilica Julia in the Forum Romanum⁸, palm and «barred P» symbols commonly being incised on the flans presumable so as to differentiate the tokens⁹.

This brief introduction about the nature of the contorniates has, I trust, highlighted the fact that very little is currently known about the pieces – fundamental question such as when they were made, by whom, where and for what purpose are open to debate and speculation. There are, however, many significant insights into ancient art and thought which the contorniates themselves can provide, and it is my intention to highlight here some of these, focusing on examples of mythological reverse-types and the insights they provide into the mind of the die-artist, their creators, at work.

As noted by Toynbee «Few of the contorniate designers can have been very highly trained or original artists : occasionally they display downright ignorance and illiteracy. Obviously they borrowed what they could, adapting existing designs, and in particular earlier coin types, of kindred content for their own purposes»¹⁰. The borrowing of a She-wolf and Twins motif from a medallion of Constantine I¹¹ to contorniates, one with a tree added above¹², and another simply with the stars¹³, is not unduly remarkable. An «Aeneas, Anchises and Ascanius» medallion-type of Antoninus Pius¹⁴ appears to have been copied on a now worn medallion of Constantine I¹⁵, which was similarly borrowed by contorniate-engravers during the «First»¹⁶ and «Second Great Striking»¹⁷ – a period of borrowing from the issuing of the original medallion to the latter contorniate-type of some 310 year! Similarly a «Rape of the Sabine Women» medallion-type issued in the name of the Divine Faustina¹⁸, and revived under Constantius II¹⁹ was copied some 20 years later on contorniates²⁰, and again after 30 years²¹ – a period from first to last of some 244 years. Such periods of survival strongly support the views of Toynbee²² and Vermeule²³ for the existence of an «archive» or «reference collection» of proofs or dies within the Imperial Mint, an «archive» which it would appear, contorniate-engravers were able to access.

The contorniate-engraver, in his search for inspiration, could also adapt borrowed designs to serve his own needs. Take, for example, a depiction of a «Horseman and lion» motif²⁴, a motif probably itself borrowed – add wings to the horse, a snake and goat-head to the lion, and Pegasus and the Chimaera are created²⁵ : a simple, yet relatively effective method of producing a desired design.

8 See Pl. V, and K.A. MCDOWALL, *op. cit.*

9 For example see A. ALFÖLDI, 1990 (above n. 7), Taf. 230.11-12.

10 J.M.C. TOYNBEE (above n. 2), p. 120.

11 F. GNECCHI, *I medaglioni romani*, Milan, 1912, Tav. 132.7.

12 A. ALFÖLDI (above n. 4), Taf. 74.4.

13 *Ibidem*, Taf. 12.2.

14 F. GNECCHI (above n. 11), Tav. 160.1.

15 *Ibidem*, Tav. 132.12.

16 A. ALFÖLDI (above n. 4), Taf. 143.1.

17 A. ALFÖLDI, 1990 (above n. 7), Taf. 145.4.

18 *Ibidem*, Taf. 258.6.

19 *Ibidem*, Taf. 258.2.

20 A. ALFÖLDI (above n. 4), Taf. 167.7.

21 *Ibidem*, Taf. 67.10.

22 J.M.C. TOYNBEE, *Greek Imperial Medallions*, in *JRS*, 34, 1944, p. 72-73.

23 C.C. VERMEULE, *Copying in Imperial Die Designs*, in *NCirc*, 60, 1952, p. 357.

24 A. ALFÖLDI (above n. 4), Taf. 1 61.5.

25 *Ibidem*, Taf. 12.10.



Tabulae Lusoriae on the pavement of the Basilica Julia, Forum Romanum, Rome (December, 1990). Diameter of that at the top c. 60 cm (Author's photographs).



The contorniate-engraver, it would seem, was often a borrower and adaptor rather than an artist in his own right. While this portrait generally holds true, some examples may be rated the works of master die-artists. A «hero and bulls» type, now generally accepted as representing Jason and the Brazen Bulls is such a piece²⁶. While probably copied from a sarcophagus or other prototype²⁷, the adaptation of the scene to the miniature frame of the flan is most successful. Modelling of the hero's body, the sense of spatial depth created by the use of overlapping planes of relief, the sense of vigour and movement created by the charging attitude of the bulls, Jason's struggle to control them, and the compositional balance which successfully avoids the trap of becoming a rigid heraldic grouping – all these features of the design suggest the hand of a master at work. Furthermore it would seem this was recognised by his contemporaries, one of whom appears to have directly copied the design²⁸. A workman of lesser talent, the copier would seem to have erred – the hero's cape is here incomplete, the bull to the right lacks modelling, its frontal-view head sits strangely atop its elongated neck, and significantly the whole beast has been placed too near the edge of the flan, and Jason's left arm has been awkwardly straightened so as to reach his horns.

A similar process can be observed in the case of various «Achilles and Penthesilea» types. What might be called the «original» contorniate-type appears an artistically successful depiction of Achilles, supporting the body of dead queen, with a horse shown behind; a design almost certainly based on a statuary prototype²⁹. Sabatier's line-drawing shows the design a little more clearly³⁰. The observer's attention is drawn to the horse's head in the background for, it would seem, it escaped the attention of a copier. On an example now in Paris³¹ no head is shown, and subsequent copiers would appear to have drawn on this mistaken type to a point where the hind-quarters of the horse and the front of the queen are awkwardly joined together so as to clearly form a female centaur³².

The meeting between Ulysses and Scylla, the mythological subject celebrated on the most number of surviving contorniates, provides further evidence for contorniate-engraver's copying directly from their peers. The «original» contorniate-type³³ (whose similarities with a Gallo-Roman relief suggest that both were based on a common prototype)³⁴, depicts the monster Scylla grasping the hair of a hapless sailor. A figure, probably Ulysses, launching an attack while a companion bringing up the rear. In the extreme lower right of the flan, under a curved feature, appears a human figure. This, I would suggest, is a personification of Charybdis in her cavern. Significantly for what was to occur later, Scylla's fish-tails, which fill the upper-field, are not actually shown to be attach to her body. Their bases disappear, obscured from view by the representation of the cave. Approximately contemporaneous with this example is a contorniate showing the same scene³⁵. I would argue that this example was copied directly from the previous type. Note the handling of the figure to the right on this piece. In his copying from the earlier example the engraver of the die would appear not to have quite understood the nature of the overlap of cave and tails. A tail on this piece is shown to end in a semi-circular bulb just above the top of the cavern. After some seventy years the design was revived. On one such example³⁶, apparently copied from the last, the fish-tail has become an independent creature whose curved mouth is shown about to swallow a

26 *Ibidem*, Taf. 54.4.

27 A. ALFÖLDI, 1990 (above n. 7), p. 140, Taf. 256.2.

28 A. ALFÖLDI (above n. 4), Taf. 53.11.

29 *Ibidem*, Taf. 167.9.

30 J. SABATIER, *Description générale des médaillons contorniates*, Paris, 1860, Pl. XIV.6.

31 A. ALFÖLDI (above n. 4), Taf. 120.9.

32 *Ibidem*, Taf. 120.8.

33 *Ibidem*, Taf. 64.12.

34 A. ALFÖLDI, 1990 (above n. 7), Taf. 257.5.

35 A. ALFÖLDI (above n. 4), Taf. 64.5.

36 *Ibidem*, Taf. 146.12.

human figure, now to be identified as a swimming sailor. In yet another example this process of elaboration is carried a stage further, and a dolphin-like creature is shown attacking an up-side-down sailor³⁷. The final product of this process resulted in the creation of a sea-monster almost as hideous as Scylla herself, with huge gaping jaws which close around a hapless victim³⁸.

As we view the *Tabulae Lusoriae* amid the ruins of the Basilica Julia (Pl. V), where one may imagine some fifteen hundred years ago the contorniates were employed in the pursuit of games far removed from the violence of the arena where they were possibly distributed, let us reflect on what those pieces examined here can tell us today. The various examples of iconographical and artistic errors which have here been highlighted reflect a complex and protracted copying process. The evidence of the mythological contorniate-types suggests that designs were borrowed directly from numismatic prototypes, or adapted from other works of art – some, like a «Jason and the Brazen Bulls» type, most successfully. It would seem that subsequent contorniate-engravers did not return to such prototypes when preparing depiction of the same subjects, but often copied directly from the works of their peers. As demonstrated this process of protracted copying and re-copying often led to corruptions which suggest that many such engravers lacked technical or artistic skills, and had limited or no true understanding of the pagan myths they professed to celebrate. The workshops of the contorniate-engravers, if not always schools of great artistic endeavour or innovation, were nonetheless places in which complex artistic processes of re-duplication and elaboration, of adaptation and misinterpretation occurred. Thus, for all the questions concerning the contorniates which have yet to be answered, the pieces themselves, particularly those depicting mythological scenes, present us with a tantalizing insight into the minds and day-to-day workings of die-engravers of the Fourth and Fifth Centuries.

³⁷ A. ALFÖLDI, 1990 (above n. 7), Taf. 257.2.

³⁸ A. ALFÖLDI (above n. 4), Taf. 162.10.

Aperçu sur la monnaie d'or dans la Dacie romaine

Radu ARDEVAN*

Une recherche entreprise en 1986 avait répertorié en Dacie 22 découvertes d'*aurei* romains du I^{er} siècle ap. J.-C. et seulement 2 ou 3 monnaies similaires de l'époque de la province romaine (II^e-III^e s.)¹. On en a conclu que la monnaie romaine d'or était présente dans la Dacie préromaine et pratiquement absente dans la province romaine de Dacie; l'explication aurait pu être la modification des relations économiques de la Dacie avec Rome après la conquête².

Mais quelques éléments s'opposent à cette théorie (la présence d'*aurei* du I^{er} siècle seulement sur le territoire de la province³; la découverte de telles pièces dans des contextes archéologiques sûrement datés des II^e et III^e siècles⁴). Depuis, de nouvelles découvertes ainsi que des études sur d'autres provinces⁵ ont conduit à une reprise de la question.

Dans ce but, nous avons rédigé un catalogue aussi complet que possible des monnaies romaines en or des I^{er}-III^e siècles trouvées en Dacie⁶, et les avons mises en relation avec les trouvailles archéologiques de ces localités⁷. La rédaction du catalogue fut assez difficile car dans les ouvrages antérieurs⁸ s'étaient insérées des erreurs et des confusions que l'on doit actuellement écarter (en consultant les publications initiales).

* Muzeul de istorie al Transilvaniei, Cluj-Napoca.

1 I. WINKLER, *Der Goldmünzenverkehr in Dazien*, dans *Musaica*, 17 (6), 1966, p. 42-43.

2 *Ibidem*, p. 43-46. Voir aussi d'autres travaux du même auteur (*Contribuții numismatice la istoria Daciei*, dans *SCȘtCluj*, 6, 1955, 1-2, p. 120-158; *Contribuții numismatice la istoria Daciei în sec. I e. n.*, dans *CercetNum*, 3, 1980, p. 33-50; *Circulația monetară în Dacia romană*, thèse dactylographiée, Bucarest, 1963, II, p. 47-50).

3 À une seule exception, Tăuteni (B. MITREA, *Penetrazione commerciale e circolazione monetaria nella Dacia prima della conquista*, dans *EDR*, 10, 1945, p. 111, n°90; Al. SASIANU, *Ancient Coinage in Western and North-Western Romania*, Oradea, 1980, p. 174, n°131a). Sa présence peut être le résultat d'un butin de guerre barbare (cf. S. DUMITRASCU, *Tezaurul de la Tăuteni-Bihor*, Oradea, 1973, p. 22-23).

4 I. WINKLER, *Musaica*, 17 (6), 1966, p. 42-43 (les cas de Palanka, Rîșnov, Tăurenii). Cf. B. MITREA, *Legături comerciale ale Geto-Dacilor din muntenia cu Republica Romana, reflectate în descoperiri monetare*, dans *SCN*, 2, 1958, p. 191.

5 J. FITZ, *Der Geldumlauf der römischen Provinzen im Donaugebiet Mitte des 3. Jahrhunderts*, I, Budapest-Bonn, 1978, p. 33-57; X. LORiot, *Trouvailles isolées de monnaies d'or romaines dans la province de Rétié (I^{er}-V^e siècles)*, dans *Studia numismatica Labacensia Al. Jeločnik oblata* (= *Situla*, 26), Ljubljana, 1988, p. 53-98; J.-P. CALLU et X. LORiot, *L'or monnayé II. La dispersion des aurei en Gaule romaine sous l'Empire (Cahiers E. Babelon, 3)*, Juan-les-Pins, 1990; J.-P. BOST, M. CAMPO et J.M. GURT, *Hallazgos de aurei y solidi en la Peninsula Iberica : introducción a su circulación en época imperial*, dans *Numisma*, 33, 180-185, 1983, p. 137-176 (apud J.-P. CALLU et X. LORiot, *op. cit.*, p. 120, note 140); X. LORiot, *Les trouvailles isolées de monnaies d'or romaines faites en Bretagne*, dans *BullSocNatAntFrance*, 1988, p. 72-74.

6 Les noms des lieux sont ceux d'aujourd'hui, à l'exception de quelques-uns du Banat occidental, qui appartient maintenant à la Yougoslavie; ceux-ci figurent avec les dénominations officielles d'avant la première guerre mondiale.

7 Chose possible surtout grâce à un ouvrage d'équipe, *Repertoriul arheologic al Transilvaniei*, manuscrit dactylographié à l'Institut d'Archéologie et d'Histoire de l'Art de Cluj-Napoca (il nous a été rendu accessible grâce à l'amabilité des collaborateurs de l'Institut). Pour les localités hors de Transylvanie, voir D. TUDOR, *Orase, îrguri și sate în Dacia romana*, Bucarest, 1968 ainsi que *Tabula Imperii Romani*, L 34 (*Aquincum-Sarmizegetusa-Sirmium*), Budapest, 1968 et L 35 (*Romula-Durostorum-Tomis*), Bucarest, 1969.

8 B. MITREA, *art. cit.*, dans *EDR*, 10, 1945, *passim*; I. WINKLER, *op. cit.*, p. 42-43; ID., *Contribuții numismatice la istoria Daciei*, dans *SCȘtCluj*, 6, 1955, 1-2, p. 120-158; ID.,



Le résultat de cette enquête est consigné dans le tableau I (les numéros étant identiques à ceux de la carte). Il nous reste à interpréter historiquement ce matériel, en tenant compte de la spécificité de la monnaie d'or à l'époque⁹.

Le tableau I¹⁰ indique donc 39 points du territoire de la Dacie où apparaissent des monnaies romaines en or des I^{er}-III^e siècles. Au total, il s'agit de 142 monnaies, dont 94 proviennent de trois trésors (n° 16, 24 et 37) et 48 sont des pièces isolées.

Contribuții numismatice la istoria Daciei în sec. I e. n., dans *CercetNum*, 3, 1980, p. 41-42; I. GLODARIU, *Dacian Trade with the Hellenistic and Roman World* (BAR Supplementary Series, 8), Oxford, 1976, p. 241-265; ID., *Relații comerciale ale Daciei cu lumea elenistică și romană*, Cluj, 1974, p. 276-297. En plus, les chroniques numismatiques rédigées régulièrement par B. Mitrea dans les revues *Dacia* et *SCIVA*.

⁹ J.-P. CALLU et X. LORIOT, *op. cit.*, p. 14-16, 19; X. LORIOT, *Trouvailles isolées de monnaies d'or romaines dans la province de Rétie (I^{er}-V^e siècles)*, dans *Situla*, 26, 1988, p. 59, 62, 71.

¹⁰ AVSL = Archiv des Vereins für siebenbürgische Landeskunde; BORZA = A. BORZA, *Banatul în timpul romanilor*, Timișoara, 1943; Buciumi = E. CHIRILĂ, N. GUDEA, C. POP, V. LUCACEL, *Das Römerlager von Buciumi*, Cluj, 1972; DAVIDESCU = M. DAVIDESCU, *Drobeta în secolele I-VII e.n.*, Craiova, 1980; IDR = I.I. RUSSU, *Inscripțiile Daciei romane*, București, 1975; IDR = I.I. RUSSU (réd.), *Inscripțiile Daciei romane*, București, I, 1975, sq.; *Musaica* = *Sbornik Filozofickej Fakulty Inuverzity Komenského. Musaica*, Bratislava; *RepTrans* = *Repertoriul arheologic al Transilvaniei*, manuscrit dactylographié à l'Institut d'Archéologie et d'Histoire de l'Art de Cluj-Napoca; ROSKA = M. ROSKA, *Erdély régészeti repertóriuma. I. Őskor* (*Thesaurus antiquitatum Transilvanicarum. Tom. I. Praehistorica*), Kolozsvár, 1942; SCȘCluj = *Studii și Cercetări științifice*, Cluj; *Tez Mureș* = E. CHIRILĂ, N. GUDEA, V. LAZAR et A. ZRINYI, *Tezaure și descoperiri monetare din Muzeul Județean Mureș*, Tg. Mureș, 1980; *TIR* = *Tabula Imperii Romani. L. 34 (Aquincum - Sarmizegetusa - Sirmium)*, Budapest, 1968; *L. 35 (Romula - Durostorum - Tomis)*, Budapest, 1969; *TRE* = *Történelmi és Régészeti Társulat Közlönye*, Temesvár; *TUDOR* = D. TUDOR, *Orașe, târguri și sate în Dacia romană*, București, 1968; *WINKLER* = I. WINKLER, *Circulația monetară în Dacia romană. I-II*, thèse dactylographiée, București, 1963.

TABLEAU I. DES AUREI ROMAINS DES IER-III^E SIÈCLES EN DACIE

| N° | Localité | Nb. de pièces (trésor) | Émetteur (en trésor) | Vestiges | | | | Bibliographie | |
|-----|--------------------|---------------------------|-------------------------|----------|---------|---------------------------|----------------|--|--|
| | | | | Daciques | Romains | Estampilles militaires | Camp romain | Numismatique | Archéologique |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. | Bandul de Cimpie | 1 | Marc Aurèle | x | x | | | <i>Tez Mureș</i> p. 24 | Roska, n°174; |
| 2. | Bixad | 1 | Néron | x | | | | <i>CercetNum</i> 3, p.41-42 | TIR L35, p. 25 |
| 3. | Bologa | 1 | Vespasien | | x | x | x | <i>EDR</i> 10, p. 110 | <i>Aluta</i> 8-9, p. 53-61 |
| 4. | Boroșneul Mare | 2 | Néron, Titus | | x | | x | <i>CercetNum</i> 3, p. 41-42 | <i>TIR</i> L 34, p.96 |
| 5. | Brașov (alentours) | 2 | Othon, Titus | | | | | <i>EDR</i> 10, p. 107 | <i>TIR</i> L 35, p. 28 |
| 6. | Buciumi | 2 | Vespasien, Domitien | | x | x | x | <i>Musaica</i> 17, p.42; <i>Buciumi</i> , p. 94 | TUDOR, p. 278-282 |
| 7. | Caransebeș (?) | 1 | Al. Sévère | | x | x | | <i>Musaica</i> 17, p.43 | <i>Buciumi</i> , <i>passim</i> |
| 8. | Călimănești | 1 | Domitien | | x | | x | <i>RevArhiv</i> 1973/2, p. 249 | <i>IDR</i> III/1, p. 141-145 |
| 9. | Cășeu | 1 | Vespasien | | x | x | x | <i>BSNR</i> 77-79, p. 243 | <i>TIR</i> L 34, p. 99 |
| 10. | Cătunele | 1 | Septime Sévère | | x | | x | WINKLER I, p. 40 | TUDOR, p. 307 |
| 11. | Comalău | 2(?) | Néron, Domitien | x | x | | x | WINKLER I, p. 56 | <i>TIR</i> L 35, p. 34 |
| 12. | Cristești | 1 | Trajan | | x | x | | <i>Tez Mureș</i> , p. 21 | TUDOR, p. 272-273 |
| 13. | Densuș | 1 | Néron | | x | x | | <i>CercetNum</i> 3, p. 41-42 | <i>IDR</i> III/4, p. 101 |
| 14. | Deta | 1 | César | | x | x | | <i>TRE</i> 23, p. 15 | <i>IDR</i> III/3, p. 14 |
| 15. | Drajna de Sus | 1 | Auguste | x | x | x | x | <i>SCIV</i> 5, p. 474 | <i>TIR</i> L 34, p. 52 |
| 16. | Drobeta | (5) | (Hadrien) | x | x | x | x | DAVIDESCU, p. 137 sq. | <i>Dacia</i> 11-12, p. 121-142 |
| 17. | Duleu | 2 | Néron, Othon | | | | | <i>EDR</i> 10, p. 104; <i>Dacia</i> 17, p. 412 | <i>IDR</i> II, p. 17-20; <i>TIR</i> L 34, p. 56 |
| 18. | Fîrlug | 2 | Néron, Vespasien | | x | | x | <i>SCȘiCluj</i> 6, p. 134 | <i>RepTrans</i> |
| 19. | Gherla | 1 | Néron | | x | x | x | <i>BSNR</i> 80-85 (sous presse) | <i>TIR</i> L 34, p. 26 |
| 20. | Gilău | 1 | Titus | | x | x | x | <i>BSNR</i> 77-79, p. 243 | <i>TIR</i> L 34, p. 60-61 |
| 21. | Gîrbou | 1 | Vespasien | | x | | | Inédit | <i>TIR</i> L 34, p. 61 |
| 22. | Moldova Veche | 1 | Titus | x | x | | x | <i>EDR</i> 10, p. 104 | <i>TIR</i> L 34, p. 81 |
| 23. | Negreni | 1 | Néron | | x | | x | <i>AVSL</i> 13, p. 73 | <i>TIR</i> L 34, p. 84 |
| 24. | Palanka | 1 + (57) | Titus (Tibère-Néron) | | x | | x | <i>TRE</i> 23, p. 31-32 | <i>TIR</i> L 34, p. 33; |
| 25. | Pančevo | 1 | Domitien | | x | x | | <i>EDR</i> 10, p. 103 | <i>IDR</i> III/1, p.34-35 |
| 26. | Ploșic | 2 | Néron, Vespasien | | | | | <i>TRE</i> 8, p. 30; <i>EDR</i> 10, p. 103 | <i>TIR</i> L 34, p.87; |
| 27. | Pojejena | 1 | Néron | | x | | x | BORZA, p. 82 | <i>IDR</i> III/1, p. 30 |
| 28. | Potoc | 1 | Titus | | x | | | <i>TRE</i> 23, p. 34 | <i>TIR</i> L 34, p.91; |
| 29. | Rebenberg | 1 | Vitellius | | | | | <i>TRE</i> 8, p. 126 | <i>IDR</i> III/1, p. 39 |
| 30. | Rîșnov | 3 | Galba, Trajan, Hadrien | x | x | x | x | <i>EDR</i> 10, p. 107; <i>BSNR</i> 77-79, p. 243 | <i>RepTrans</i> |
| 31. | Grădiștea de Munte | 1 | Vespasien | x | x | x | x | <i>BSNR</i> 77-79, p. 243 | ROSKA, p. 32; <i>Cumidava</i> 8, p. 65-72; <i>TIR</i> L 35, p.34 |
| 32. | Sovata | 1 | Vespasien | x | x | | x | <i>Tez Mureș</i> , p. 21 | <i>TIR</i> L 34, p.63; <i>IDR</i> III/3, p. 265-266 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----|-----------|------|---------------|---|---|---|---|--|---|
| 33. | Şibot | 2 | Néron | | x | x | | <i>Apulum</i> 25, p. 161-162 <i>IDR</i> III/3, p. 277 | <i>TIR</i> L 34, p. 101 |
| 34. | Sînpaul | 1 | Othon | | x | x | x | <i>EDR</i> 10, p. 109 | <i>TIR</i> L 35, p. 67 |
| 35. | Socol | 1 | Tibère | x | | | | <i>EDR</i> 10, p. 103 | <i>Roska</i> , p. 277; <i>Banatica</i> 4, p. 455 |
| 36. | Tăureni | 1 | Marc Aurèle | | x | | | <i>CercetNum</i> 1, p. 22 | <i>TIR</i> L 35, p. 71 |
| 37. | Timișoara | (32) | (Auguste) | | x | | | <i>TRE</i> 23, p. 40 | <i>Banatica</i> 7, p. 198, 200 |
| 38. | Varadia | 2 | Néron, Trajan | x | x | x | x | <i>TRE</i> 23, p. 44 | <i>TIR</i> L 34, p. 30 |
| 39. | Zlatna | 1 | Néron | | | x | x | <i>Apulum</i> 25, p. 283 | <i>TIR</i> L 34, p. 28. |

La répartition chronologique des monnaies connues fut également poursuivie séparément, par trésor et pièce isolée. La conquête de la Dacie par les Romains eut lieu en 106 ap. J.-C., sous le règne de l'empereur Trajan. Nous avons considéré toutes les émissions de Trajan comme postérieures à la conquête. Le tableau II comprend le regroupement chronologique de toutes les monnaies connues, ainsi que les pourcentages pour chaque catégorie.

TABLEAU II. LES MONNAIES D'OR EN DACIE, IER-III^e SIÈCLES

| Émetteur | Pièces isolées | | Pièces en trésors | | Total | |
|-------------------------------|----------------|--------------|-------------------|--------------|------------|--------------|
| | Nbre | % | Nbre | % | Nbre | % |
| César | 1 | 2,08 | | | 1 | 0,70 |
| Auguste | 1 | 2,08 | 32 | 34,04 | 33 | 23,24 |
| Tibère | 1 | 2,08 | 3 | 3,19 | 4 | 2,81 |
| Caligula | | | 1 | 1,06 | 1 | 0,70 |
| Claude | | | 5 | 5,32 | 5 | 3,52 |
| Néron | 13 | 27,83 | 17 | 18,08 | 30 | 21,12 |
| 68/69 | 6 | 12,50 | 2 | 2,12 | 8 | 5,63 |
| Flaviens | 18 | 37,50 | 22 | 23,40 | 40 | 28,17 |
| I^{er} siècle | 40 | 83,33 | 82 | 87,23 | 122 | 85,91 |
| Nerva-Trajan | 3 | 6,25 | 7 | 7,44 | 10 | 7,04 |
| Hadrien | 1 | 2,08 | 5 | 5,32 | 6 | 4,22 |
| Antonin | | | | | | |
| Marc Aurèle | 2 | 4,16 | | | 2 | 1,41 |
| Commode | | | | | | |
| II^e siècle | 6 | 12,50 | 12 | 12,76 | 18 | 12,67 |
| Septime Sévère | 1 | 2,08 | | | 1 | 0,70 |
| Caracalla | | | | | | |
| Macrin | | | | | | |
| Élagabale | | | | | | |
| Alex. Sévère | 1 | 2,08 | | | 1 | 0,70 |
| III^e siècle | 2 | 4,16 | | | 2 | 1,41 |
| TOTAL | 48 | | 94 | | 142 | |

La proportion des monnaies antérieures à la conquête de la Dacie (83,33 % pour les découvertes isolées et 87,23 % pour les trésors) semble confirmer la conclusion des recherches antérieures. Mais les choses changent dès que l'on enquête sur la période de circulation de ces monnaies.

Un premier groupe comprend les 8 monnaies frappées après la conquête de la Dacie et qui ont circulé à coup sûr dans la province (n°1, 7, 10, 12, 30, 36, 38), auxquelles on peut ajouter le petit trésor de Drobeta (n°15). Par contre, il n'y a que deux pièces (n°2 et 35) qui apparaissent dans des contextes certainement préromains, pièces auxquelles on peut également joindre le trésor de Timișoara (n°37).

Les plus nombreuses sont les monnaies qui, bien que frappées avant la conquête, ont été trouvées dans des contextes archéologiques romains catégoriquement postérieurs à l'année 106 ap. J.-C., ou dans des établissements pour lesquels on ne connaît que des vestiges du temps de la province. En tout, 26 *aurei* (n°3, 4, 6, 8, 9, 13, 14, 18-21, 23-25, 27, 28, 30-32, 34, 39). Avec la série des monnaies émises aux II^e et III^e siècles, leur nombre s'élève à 34. À cette catégorie, il faut ajouter également le trésor de Palanka (n°24) car il contenait aussi des monnaies d'argent s'échelonnant jusqu'à Hadrien¹¹.

Enfin, il reste encore les monnaies d'or du I^{er} siècle trouvées dans des localités aux vestiges autant daciques que romains, ou pour lesquelles on ne connaît aucune antiquité – au total 11 monnaies (n°5, 11, 15, 17, 22, 26, 29, 38). Sur 4 d'entre elles, rien ne peut être dit (n°17, 26, 29). Dans deux autres localités, Drajna de Sus et Moldova Veche (n°15 et 22), les établissements civils signalés sont modestes; seule la présence de camps romains leur confère une certaine importance. Par conséquent, nous sommes enclin à lier la présence de ces monnaies d'or à l'existence de garnisons locales¹². La même conclusion s'impose pour Comalău (n°11). Quant à Vărădia (n°38), important établissement sous le royaume dace ainsi qu'à l'époque romaine, il est plus difficile à choisir; éventuellement, l'analogie avec les situations ci-dessus pourrait soutenir dans ce cas encore la même conclusion. Il n'est pas impossible non plus que les deux pièces trouvées aux alentours de Braşov (n°5) aient circulé également après la conquête; les découvertes de pièces similaires dans des contextes des II^e-III^e siècles, la proximité de Rîşnov et l'importance commerciale de cette zone renforcent cette supposition¹³.

En conclusion, parmi les 11 monnaies mentionnées, 4 semblent avoir circulé plus probablement après la conquête, et 3 autres pourraient être dans la même situation. Il nous manque cependant une preuve certaine.

On peut simplifier le calcul si l'on partage en deux catégories les pièces du dernier groupe : les 4 dont on ne peut rien savoir de précis seront attribuées à la circulation de la Dacie préromaine, tandis que les 4 autres, qui auraient pu circuler au temps de la province, vont être ajoutées aux monnaies circulant aux II^e-III^e siècles. Il en résulte donc un rapport de 6 (la Dacie préromaine) à 38 (la province romaine); restent à l'écart 3 pièces dont la période de circulation est impossible à préciser (celles de Braşov et Vărădia).

La plupart des monnaies circulant avant la conquête furent trouvées en Dacie du sud-ouest, le Banat (n°17, 26, 29, 35, 37). La rareté de la monnaie d'or à l'époque nous fait voir en elles plutôt des pillages de guerre ou des stipendia que du numéraire utilisé dans le commerce¹⁴.

Les découvertes de monnaies isolées qui ont circulé au temps de la province (34 pièces – ou peut-être 38) se groupent géographiquement en quatre zones. Deux d'entre elles (le *limes* du nord-ouest et celui de l'est) représentent des portions de frontière animées par un vif commerce et munies de troupes¹⁵. Le même caractère marque la zone du sud-ouest (le Banat) qui représente en plus la principale liaison économique avec

¹¹ I. BERKESZI, *Délmagyarország éremleletei*, dans *TRE*, 23, 1907, p. 31-32.

¹² X. LORiot, *op. cit.*, p. 59.

¹³ N. GUDEA et I. POP, *Das Römerlager von Rîşnov (Rosenau). Cumidava*, Braşov, 1971, p. 9, 63; M. CHITESCU, M. MARCU et Gh. POENARU-BORDEA, *Monedele antice de aur şi argint din colecţia Muzeului Judeţean Braşov (= Cumidava. XI/3)*, Braşov, 1978, p. 19, 20-21.

¹⁴ Le marché du royaume dace est dominé nettement par le denier romain (B. MITREA, *op. cit.*, *passim*; I. GLODARIU, *op. cit.*, p. 96-97; M. CHITESCU, *Numismatic Aspects of the History of the Dacian State. The Roman Republican Coinage in Dacia and the Geto-Dacian Coins of Roman Type (BAR International Series, 112)*, Oxford, 1981, *passim*.

¹⁵ Cf. *supra*, note 13; M. MACREA, *Viaţa în Dacia romană*, Bucarest, 1969, p. 230-232; N. GUDEA, *Limesul Daciei romane de la Traianus (106) la Aurelianus (275)*, dans *AMusPorol*, 1, 1977, p. 108-112.

l'Empire et qui fournit le plus important commerce de la province¹⁶. Enfin, les découvertes de la Dacie centrale, plus ou moins concentrées dans le bassin de la rivière de Maris, se placent sur la plus importante voie commerciale et stratégique de la province¹⁷.

Une comparaison facile avec d'autres provinces européennes étudiées est présentée dans le tableau III¹⁸. Pour la Dacie, nous avons adopté trois variantes : A – le nombre total des découvertes (tout comme on a procédé pour les autres provinces); B – le nombre total des pièces circulant à coup sûr pendant la province (la variante maximale); C – idem (la variante minimale). Mais au I^{er} siècle, la Dacie n'appartenait pas comme les autres provinces à l'Empire. Nous estimons que la variante C offre les résultats les plus proches de la vérité.

Le tableau III permet une vision d'ensemble. La Dacie, intégrée plus tard dans l'Empire, connaît une circulation plus faible de la monnaie d'or. Aucune comparaison avec les provinces occidentales n'est possible. Seuls le Norique et la Pannonie (pour toutes les deux, on dispose de bilans incomplets) présentent une image similaire. Pourtant, la monnaie d'or paraît dans la Dacie romaine presque de la même façon que dans les provinces limitrophes¹⁹. On ne peut plus parler de son absence dans la province carpathe.

TABLEAU III. NOMBRE ET POURCENTAGES (PAR SIÈCLE) DES TROUVAILLES DE MONNAIES D'OR ISOLÉES PROVENANT DE CERTAINES PROVINCES EUROPÉENNES

| Province | Nbre total | I ^{er} siècle | | II ^e siècle | | III ^e siècle (200-275) | |
|--------------------|------------|------------------------|-------|------------------------|-------|-----------------------------------|-------|
| | | Nbre | % | Nbre | % | Nbre | % |
| Bretagne | 155 | 112 | 72,25 | 33 | 17,74 | 10 | 6,45 |
| Espagne | 58 | 36 | 62,06 | 19 | 32,75 | 3 | 5,17 |
| Gaules | 1088 | 665 | 61,12 | 308 | 28,30 | 115 | 10,57 |
| Belgique-Germanies | 528 | 332 | 62,88 | 143 | 27,08 | 53 | 10,03 |
| Champs Décumates | 99 | 65 | 65,65 | 28 | 28,28 | 6 | 6,06 |
| Rétie | 61 | 37 | 60,65 | 21 | 34,42 | 3 | 4,91 |
| Norique | 37 | 22 | 59,46 | 9 | 24,32 | 6 | 16,21 |
| Pannonies | 33 | 18 | 54,54 | 12 | 36,36 | 3 | 9,09 |
| Dacie (A) | 48 | 40 | 83,33 | 6 | 12,50 | 2 | 4,16 |
| Dacie (B) | 38 | 30 | 78,94 | 6 | 15,78 | 2 | 5,26 |
| Dacie (C) | 34 | 26 | 77,14 | 6 | 17,14 | 2 | 5,71 |

A. nombre total des pièces; B. nombre total sûr, variante maximale; C. nombre total sûr, variante minimale.

La prépondérance des monnaies du I^{er} siècle est, elle aussi, commune à toutes les provinces examinées. En Dacie, la monnaie du I^{er} siècle est bien présente dans la circulation monétaire des II^e et III^e siècles²⁰. Quant à la proportion des *aurei* de chaque

¹⁶ V. CHRISTESCU, *Viața economică a Daciei romane*, Pitești, 1929, p. 107-109, 128-129; M. MACREA, *op. cit.*, p. 161, 229, 325; I. GLODARIU, *op. cit.*, p. 104.

¹⁷ V. CHRISTESCU, *op. cit.*, p. 100-101; M. MACREA, *op. cit.*, p. 151-152.

¹⁸ Pour la bibliographie des autres provinces, cf. *supra*, note 5.

¹⁹ Réalité entrevue aussi par I. WINKLER, *art. cit.*, dans *Musaica*, 17 (6), 1966, p. 45-46.

²⁰ ID., *Despre circulația monetară la Porolissum*, dans *AMusNapocensis*, 1, 1964, p. 218 (Porolissum) et ID., *Circulația monetară la Apulum*, dans *AMusNapocensis*, 2, 1965, p. 255-256 (Apulum); ID., *Descoperiri monetare în Ulpia Traiana Sarmizegetusa*, dans *Sargetia*, 11-12, 1974-1975, p. 131 (Sarmizegetusa); I. WINKLER et C. BALOI, *Circulația monetară în așezările antice de pe teritoriul comunei Orlea*, dans *AMusNapocensis*, 10, 1973, p. 191-194 (Orlea); I. WINKLER et

empereur, elle est également similaire à celle des autres provinces : Néron est l'émetteur le mieux représenté, mais les monnaies des Flaviens (toutes ensemble) occupent la première place.

Toutefois, les pourcentages des monnaies d'or de Dacie pour chaque siècle sont assez différents de ceux constatés dans d'autres provinces. Même dans la variante C, les monnaies du I^{er} siècle dominent trop nettement. Il faut donc accepter une pénétration massive de la monnaie d'or du I^{er} siècle en Dacie à un certain moment – phénomène qui ne s'est plus répété par la suite.

Les contextes de découverte offrent l'explication. Les 34 monnaies sûrement présentes dans la province proviennent de 27 endroits; parmi ceux-ci, 18 (66,66 %) étaient munis à ce moment-là d'un camp romain²¹, tandis que dans 6 autres (22,22 %), on a la certitude d'une présence militaire (des estampilles téglulaires)²². Le chiffre s'élève en tout à 24 points, c'est-à-dire 88,89 % du total. Si l'on additionne les monnaies des trois petits établissements autochtones dans lesquels ont également fonctionné des camps romains²³, le nombre total des pièces s'élève à 38 et celui des endroits connus à 30; parmi ceux-ci, les établissements avec des garnisons sont au nombre de 27 (90 %). Les deux trésors d'*aurei*, de la province²⁴ proviennent toujours de telles localités. Donc, la présence de la monnaie d'or dans la Dacie romaine est liée indubitablement à l'élément militaire.

Quant au moment de sa pénétration dans la province, ce fut certainement le règne de Trajan, juste après la conquête de la Dacie²⁵. Les vétérans libérés, beaucoup d'entre eux en Dacie même, et les nombreux colons emmenés dans la nouvelle province²⁶ ont dû être soutenus matériellement par l'État. Le type des monnaies d'or arrivées jusqu'à nous confirme cette hypothèse; on le sait, dans leur majorité, elles appartiennent à des émissions antérieures à Trajan, et Trajan lui-même frappa de nombreuses séries d'*aurei* surtout après la conquête de la Dacie²⁷.

Par conséquent, on peut affirmer que, à part une circulation réduite d'un petit nombre de pièces d'or, la Dacie romaine connaît un afflux remarquable d'*aurei* seulement dans les premières années après la conquête. Les principaux bénéficiaires de cette abondance de numéraire précieux furent les militaires et les vétérans.

A. HOPÂRTEAN, *Moneda antică la Potaissa*, Cluj, 1973, p. 103-124 (Potaissa); E. CHIRILĂ, N. GUDEA, C. POP, V. LUCACEL, *Das Römerlager von Buciumi*, Cluj, 1972, p. 94-107, 121 (Buciumi); M. CHITESCU, Gh. POENARU-BORDEA, *Contribuții la istoria Diernei în lumina descoperirilor monetare din săpăturile arheologice din 1967*, dans *BSNR*, 75-76, 1981-1982, p. 184 (Dierna). Pour les trésors, D. PROTASE, *Les trésors monétaires de la Dacie romaine. Leur signification socio-économique et ethno-politique*, dans *Congresso Internazionale di Numismatica, Roma 11-16 settembre 1961. Atti*, II, Roma, 1965, p. 423-430.

²¹ Tableau I, n°3, 4, 6, 8-10, 23, 24, 27, 30-32, 34, 38, 39.

²² *Ibidem*, n°7, 12-14, 25, 33.

²³ *Ibidem*, n°11, 15, 22.

²⁴ *Ibidem*, n°16 et 24.

²⁵ J. CARCOPINO, *Les richesses des Daces et le redressement de l'Empire romain sous Trajan*, dans *Dacia* I, 1924, p. 28-34; E. CIZEK, *Epoca lui Traian*, Bucarest, 1980, p. 328-349.

²⁶ M. MACREA, *op. cit.*, p. 251-253; E. CIZEK, *op. cit.*, p. 316-323.

²⁷ Entre 98-102, l'atelier de Rome frappe 23 types de pièces d'or, tandis que de 103 à 117 il en produit 114 (*RIC*, II, respectivement p. 245-249, 249-271). Pour les mêmes périodes, P.L. STRACK, *Untersuchungen zur Römischen Reichsprägung des zweiten Jahrhunderts*, II, Stuttgart, 1931, Katalog offre un rapport de 16 à 103.

La circulation monétaire à Tomis aux IV^e-V^e siècles

Gh. POENARU BORDEA et Radu OCHEȘEANU*

Dans le cadre de l'effort consacré depuis une vingtaine d'années à la recherche systématique de la numismatique du Bas-Empire romain pour la province de la Scythie Mineure, la capitale Tomis – aujourd'hui Constanța – (ancienne colonie milésienne, important port du littoral ouest du Pont Euxin), à l'exception de quelques trésors monétaires¹, n'a bénéficié pour les monnaies isolées que d'un nombre assez réduit d'informations éparpillées dans les chroniques de découvertes monétaires en Dobroudja².

Nous nous proposons de présenter et d'analyser un premier lot important de monnaies en bronze argenté et en cuivre des IV^e-V^e siècles, spécialement de 294 à 491. Il est conservé dans les collections du Musée d'Histoire Nationale et d'Archéologie de Constanța et sera complété et comparé dans le futur avec le matériel numismatique de la même époque se trouvant à l'Institut d'Archéologie de Bucarest. Ce lot est composé de 1.038 monnaies provenant de fouilles archéologiques, de recherches de sauvetage ou trouvées par hasard, et surtout de la collection du Musée, alimentée par les nombreux donateurs ou collectionneurs, avec une origine locale certaine, tomitaine ou du voisinage immédiat de la ville.

Après avoir dressé le catalogue des monnaies en vue d'une analyse circonstanciée, nous les avons réparties selon 23 étapes chronologiques inégales, tenant compte des réformes monétaires et des règnes, ou des plus importantes modifications typologiques (tabl. I, fig. 1).

Les périodes comptant le plus grand nombre de monnaies sont les suivantes : 330-336 avec 121 ex., 383-395 avec 107 ex., 354-358 avec 95 ex., 364-378 avec 85 ex., 294-307 avec 75 ex., 318-324 avec 72 ex., 395-402 avec 63 ex. Suivent les périodes ci-après : 336-341 avec 54 ex., 425-450 avec 52 ex., 307-313 avec 51 ex., 324-330 avec 48 ex., 342-348 avec 40 ex., 358-363 et 408-425 avec 34 ex., 402-408 avec 31 ex. et 348-354 avec 26 ex. Ensuite, avec un nombre encore plus réduit de monnaies, nous avons les périodes suivantes : 313-317 avec 15 ex., 363-364 avec 10 ex., 378-383 avec 7 ex., et les étapes de la deuxième moitié du Ve siècle : 474-491 avec 7 ex., 457-474 avec 6 ex. et 450-457 avec 5 ex.

Manquent totalement dans notre lot les monnaies du commencement du règne d'Anastase mais leur présence à Tomis est certaine : il existe au moins une pièce, retrouvée isolément et conservée aujourd'hui dans la collection de l'Institut d'Archéologie

* Institut d'archéologie, Bucarest.

1 Gh. POENARU BORDEA, *Note numismatice dobrogene*, dans *SCN*, 4, 1968, p. 399, 401-402; R. OCHEȘEANU, *Un depozit de monede romane descoperit în Constanța*, dans *BSNR*, 67-69, 1973-1975, p. 105-111; ID. et P.I. DICU, *Monede antice și bizantine în Dobrogea*, dans *BSNR*, 75-76, 1981-1982, p. 451-453; R. OCHEȘEANU, *Cîteva descoperiri monetare din secolul IV e.n. în Scythia Minor*, dans *Pontica*, 17, 1984, p. 131-134; Gh. POENARU BORDEA, R. OCHEȘEANU, A. SMARANDA et A. DIACONU, *Un tezaur de monede de bronz din vremea împăratului Constantin cel Mare descoperit la Tomis*, dans *Pontica*, 23, 1990, p. 267-275.

2 R. OCHEȘEANU et Gh. PAPUC, *Monede grecești, romane și bizantine, descoperite în Dobrogea I*, dans *Pontica*, 5, 1972, p. 472-473, n°35-52; ID., *Monede grecești, romane și bizantine, descoperite în Dobrogea II*, dans *Pontica*, 6, 1973, p. 368-370, n°183-188; ID., *Monede grecești, romane și bizantine, descoperite în Dobrogea III*, dans *Pontica*, 7, 1974, p. 399-405, n°264-331; ID., *Monede grecești, romane și bizantine, descoperite în Dobrogea IV*, dans *Pontica*, 8, 1975, p. 441, n°494; ID., *Monede grecești, romane și bizantine, descoperite în Dobrogea V*, dans *Pontica*, 9, 1976, p. 220-225, n°534-580; R. OCHEȘEANU et P.I. DICU, *loc. cit.*, p. 444, n°19-23; A. VERTAN et G. CUSTUREA, *Descoperiri monetare în Dobrogea IV*, dans *Pontica*, 15, 1982, p. 277, n°421-432; ID., *Descoperiri monetare în Dobrogea VI*, dans *Pontica*, 17, 1984, p. 247, n°880-888.

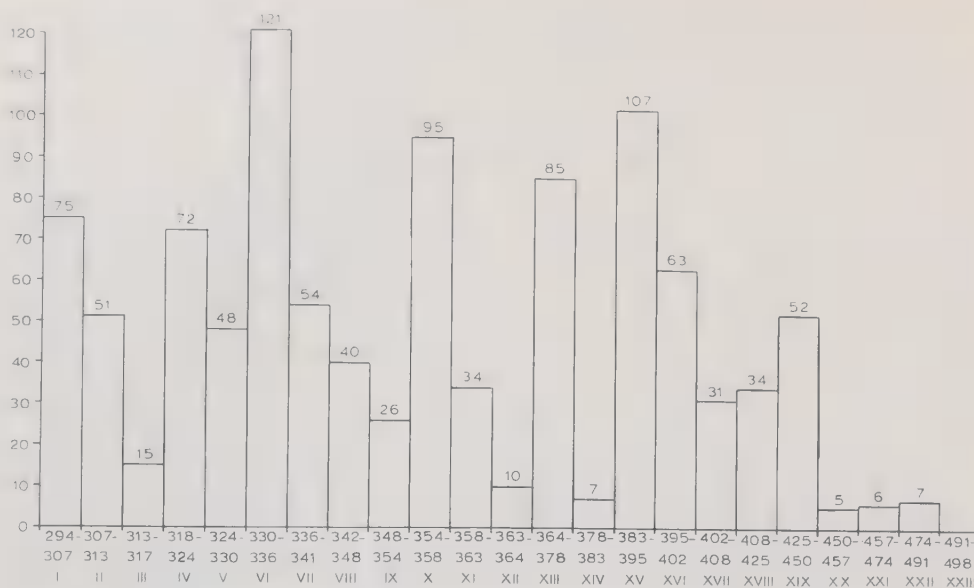


Fig. 1. Tomis. Circulation monétaire aux IVe-Ve siècles. Nombre de monnaies.

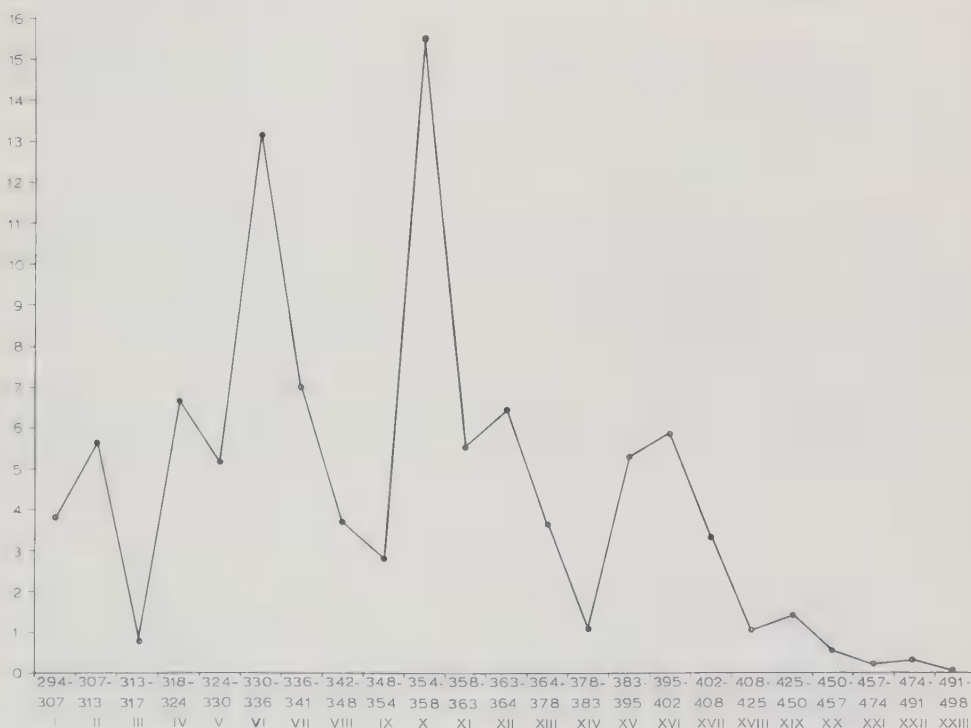


Fig. 2. Tomis. Circulation monétaire aux IVe-Ve siècles. Pourcentage des coefficients monnaies/an.

de Bucarest³, ainsi qu'un nombre assez important d'exemplaires faisant partie du trésor découvert dans le quartier Anadolchioi avec les dernières monnaies de Justinien⁴.

³ Institut d'Archéologie de Bucarest, inv. n°442/126.

⁴ B. MITREA, *Un tezaur de monede bizantine descoperit la Constanța*, dans *Pontica*, 16, 1983, p. 239-262 (surtout p. 244-245); Gh. POENARU BORDEA et E. NICOLAE, *Minimi din tezaurul descoperit la Constanța, în cartierul Anadolchioi*, dans *BSNR*, 80-85, 1986-1991 (sous presse).

Afin de pouvoir pousser plus loin notre analyse, nous avons calculé le coefficient monnaies/an (*ratio*) qui offre une image de l'intensité de la circulation aux différentes périodes, sans tenir compte de leur durée (tabl. I, fig. 2).

Partant d'un coefficient de 5,78 (3,78 % du total des coefficients) en 294-307, on constate une hausse légère en 307-313, suivie par une brusque baisse en 313-317 et une hausse de 318-324 à un niveau supérieur à celui de 307-313, une faible baisse en 324-330, après laquelle nous enregistrons un premier pic en 330-336 avec 20,16 (13,21 % du total des coefficients). Suivent trois baisses successives en 336-341, 342-348 et 348-354 qui nous portent à un niveau de seulement 4,33 (2,84 % du total), pour avoir ensuite une croissance très accentuée qui nous mène au point maximum (le pic le plus élevé de la courbe) : 23,75 (15,57 % du total). Puis on enregistre une nouvelle baisse en 358-363 (précisons qu'entre 361-363 – ou peut-être mieux septembre 362 – les monnaies deviennent très rares), une hausse en 363-364 et deux nouvelles baisses en 364-378 et 378-383, cette dernière nous menant près du niveau le plus bas de la circulation. Après 383-395, la circulation redevient normale et le reste en 395-402, mais par la suite, les baisses – à l'exception de la période 425-450 qui enregistre une très légère hausse – deviennent pratiquement constantes, indiquant une détérioration de la circulation même avant la moitié du Ve siècle, pratiquement tout de suite après 402.

TABLEAU I. ANALYSE DE LA CIRCULATION MONÉTAIRE À TOMIS AUX IVE-VE SIÈCLES PAR ÉTAPES CHRONOLOGIQUES

| N° | Étape | Durée de l'époque | Nb de monnaies | % du total | Coeff. monnaies/année | Dynamique | | | |
|-------|-----------|-------------------|----------------|------------|-----------------------|------------------------------------|---|--|--------------------------------------|
| | | | | | | ± par rapport au coeff. moyen 6,63 | % par rapport au nb de monnaies de l'étape antérieure | % par rapport au coeff. monnaies/année de l'étape antérieure | % du total des coeff. monnaies/année |
| I | 294-307 | 13 | 75 | 7,22 | 5,78 | - 0,85 | — | — | 3,78 |
| II | 307-313 | 6 | 51 | 4,91 | 8,50 | + 1,87 | 68,00 | 147,05 | 5,57 |
| III | 313-317 | 4 | 15 | 1,44 | 1,25 | - 5,38 | 29,32 | 14,70 | 0,81 |
| IV | 318-324 | 7 | 72 | 6,93 | 10,28 | + 3,65 | 481,25 | 822,40 | 6,73 |
| V | 324-330 | 6 | 48 | 4,62 | 8,00 | + 1,37 | 66,66 | 77,82 | 5,24 |
| VI | 330-336 | 6 | 121 | 11,65 | 20,16 | + 13,53 | 252,16 | 252,00 | 13,21 |
| VII | 336-341 | 5 | 54 | 5,20 | 10,80 | + 4,17 | 44,63 | 53,57 | 7,08 |
| VIII | 342-348 | 7 | 40 | 3,85 | 5,71 | - 0,92 | 74,03 | 52,87 | 3,74 |
| IX | 348-354 | 6 | 26 | 2,50 | 4,33 | - 2,30 | 64,93 | 75,83 | 2,83 |
| X | 354-358 | 4 | 95 | 9,15 | 23,75 | + 17,12 | 366,00 | 5,48 | 15,57 |
| XI | 358-361/3 | 4 | 34 | 3,27 | 8,50 | + 1,87 | 35,73 | 35,78 | 5,57 |
| XII | 363-364 | 1 | 10 | 0,96 | 10,00 | + 3,37 | 29,35 | 117,64 | 6,55 |
| XIII | 364-378 | 15 | 85 | 8,18 | 5,66 | - 0,97 | 852,08 | 56,60 | 3,71 |
| XIV | 378-383 | 4 | 7 | 0,67 | 1,75 | - 4,88 | 8,19 | 30,91 | 1,14 |
| XV | 383-395 | 13 | 107 | 10,30 | 8,23 | + 1,60 | 1537,31 | 470,28 | 5,39 |
| XVI | 395-402 | 7 | 63 | 6,06 | 9,00 | + 2,37 | 58,83 | 109,35 | 5,90 |
| XVII | 402-408 | 6 | 31 | 2,98 | 5,16 | - 1,47 | 49,17 | 57,33 | 3,38 |
| XVIII | 408-425 | 17 | 34 | 3,27 | 2,00 | - 4,63 | 109,73 | 38,75 | 1,31 |
| XIX | 425-450 | 25 | 52 | 5,00 | 2,08 | - 4,55 | 152,90 | 104,00 | 1,36 |
| XX | 450-457 | 6 | 5 | 0,48 | 0,83 | - 5,80 | 9,60 | 39,90 | 0,54 |
| XXI | 457-474 | 17 | 6 | 0,57 | 0,35 | - 6,28 | 118,75 | 42,16 | 0,22 |
| XXII | 474-491 | 17 | 7 | 0,67 | 0,41 | - 6,22 | 117,54 | 117,54 | 0,26 |
| XXIII | 491-498 | 8 | 0 | 0 | 0 | - 6,63 | 0 | 0 | 0 |

Nous nous sommes normalement posé la question du comportement de la circulation monétaire à Tomis dans le cadre de la province et dans le cadre plus large de l'Empire, en vue de saisir d'éventuelles coïncidences et différences. Pour pouvoir répondre et tenant compte du fait que le nombre d'échantillons mis à notre disposition était totalement différent pour le IVE et pour le Ve s., nous avons conçu l'analyse séparée des deux grandes époques, en terminant l'analyse pour le IVE s. avec l'étape 383-395, à la fin de laquelle se produit le partage de l'Empire entre les successeurs de Théodose Ier le Grand - Honorius en Occident et Arcadius en Orient.

Pour le IVE s. d'abord, pris comme 100 %, nous avons refait les calculs pour Tomis et avons calculé le coefficient monnaies/an et le % du total des coefficients

TABLEAU II. DOBROUDJA. ANALYSE DES ÉCHANTILLONS DU IV^e SIÈCLE

| N° | Étape | Durée de l'époque (années) | AXIOPOLIS | | | ISTROS | | | TROESMIS | | |
|--------|-----------|----------------------------|------------------|---------------|------------------------------|------------------|---------------|------------------------------|------------------|---------------|------------------------------|
| | | | Nbr. de monnaies | Coef. mon./an | % du total des coef. mon./an | Nbr. de monnaies | Coef. mon./an | % du total des coef. mon./an | Nbr. de monnaies | Coef. mon./an | % du total des coef. mon./an |
| I-II | 294-313 | 19 | 22 | 1,15 | 26,03 | 86 | 2,96 | 11,14 | 4 | 0,21 | 1,64 |
| III-IV | 313-324 | 11 | 26 | 2,36 | 11,56 | 73 | 6,63 | 24,96 | 19 | 1,72 | 13,45 |
| V | 324-330 | 6 | 7 | 1,16 | 5,68 | 18 | 3,00 | 11,29 | 3 | 0,50 | 3,91 |
| VI | 330-336 | 6 | 17 | 2,83 | 13,87 | 14 | 2,33 | 8,77 | 9 | 1,50 | 11,73 |
| VII | 336-341 | 5 | 13 | 2,60 | 12,74 | 4 | 0,80 | 3,01 | 7 | 1,40 | 10,95 |
| VIII | 342-348 | 7 | 6 | 0,85 | 4,16 | 2 | 0,28 | 1,05 | 3 | 0,42 | 3,28 |
| IX | 348-354 | 6 | 7 | 1,16 | 5,68 | 2 | 0,33 | 1,24 | 2 | 0,33 | 2,58 |
| X | 354-358 | 4 | 18 | 4,50 | 22,05 | 11 | 2,75 | 10,35 | 16 | 4,00 | 31,29 |
| XI | 358-361/3 | 4 | 2 | 0,50 | 2,45 | 3 | 0,75 | 2,82 | 3 | 0,75 | 5,86 |
| XII | 363-364 | 1 | 1 | 1 | 4,90 | 4 | 4,00 | 15,06 | 1 | 1,00 | 7,82 |
| XIII | 364-378 | 15 | 23 | 1,53 | 7,50 | 26 | 1,73 | 6,51 | 10 | 0,66 | 5,16 |
| XIV-XV | 378-395 | 17 | 13 | 0,76 | 3,72 | 17 | 1,00 | 3,76 | 5 | 0,29 | 2,26 |
| | | | 155 | 20,40 | | 260 | 26,56 | | 82 | 12,78 | |
| N° | Étape | Durée de l'époque (années) | TROPAEUM TRAIANI | | | NORD DOBROUDJA | | | TOMIS | | |
| | | | Nbr. de monnaies | Coef. mon./an | % du total des coef. mon./an | Nbr. de monnaies | Coef. mon./an | % du total des coef. mon./an | Nbr. de monnaies | Coef. mon./an | % du total des coef. mon./an |
| I-II | 294-313 | 19 | 11 | 0,57 | 1,04 | - | - | - | 126 | 6,63 | 5,64 |
| III-IV | 313-324 | 11 | 32 | 2,90 | 5,32 | 18 | 1,63 | 5,05 | 87 | 7,90 | 6,72 |
| V | 324-330 | 6 | 12 | 2,00 | 3,67 | 7 | 1,16 | 3,59 | 48 | 8,00 | 6,80 |
| VI | 330-336 | 6 | 28 | 4,66 | 8,56 | 15 | 2,50 | 7,75 | 121 | 20,16 | 17,15 |
| VII | 336-341 | 5 | 29 | 5,80 | 10,65 | 20 | 4,00 | 12,40 | 54 | 10,80 | 9,18 |
| VIII | 342-348 | 7 | 21 | 3,00 | 5,51 | 11 | 1,57 | 4,86 | 40 | 5,71 | 4,85 |
| IX | 348-354 | 6 | 7 | 1,16 | 2,13 | 21 | 3,50 | 10,85 | 26 | 3,71 | 3,15 |
| X | 354-358 | 4 | 75 | 18,75 | 34,45 | 37 | 9,25 | 28,68 | 95 | 23,75 | 20,20 |
| XI | 358-361/3 | 4 | 24 | 6,00 | 11,02 | 3 | 0,75 | 2,32 | 34 | 8,50 | 7,23 |
| XII | 363-364 | 1 | 3 | 3,00 | 5,51 | 5 | 5,00 | 15,50 | 10 | 10,00 | 8,50 |
| XIII | 364-378 | 15 | 60 | 4,00 | 7,35 | 32 | 2,13 | 6,60 | 85 | 5,66 | 4,81 |
| XIV-XV | 378-395 | 17 | 44 | 2,58 | 4,74 | 13 | 0,76 | 2,35 | 114 | 6,70 | 5,70 |
| | | | 346 | 54,42 | | 182 | 32,25 | | 840 | 117,52 | |

monnaies/an pour les échantillons de la Dobroudja disponibles pour le moment et ayant une quantité suffisante de monnaies pour être, faute de mieux, représentative. Les six échantillons sont les suivants : Axiopolis : 155 ex.⁵; Istros : 260 ex.⁶; Troesmis :

TABLEAU III. DOBROUDJA. MODÈLE STATISTIQUE POUR LE IVE SIÈCLE

| | I-II | III-IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV-XV |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|-------------|
| | 294- 313 | 313- 324 | 324- 330 | 330- 336 | 336- 341 | 342- 348 | 348- 354 | 354- 358 | 358- 361/3 | 363- 364 | 364- 378 | 378- 395 |
| Moyenne (X) | 9,09 | 11,17 | 5,82 | 11,30 | 9,82 | 3,95 | 4,27 | 25,33 | 4,28 | 9,54 | 6,32 | 3,75 |
| Écart standard + | 18,29 | 18,09 | 8,53 | 14,65 | 13,08 | 5,42 | 7,51 | 34,53 | 8,44 | 13,78 | 7,33 | 4,97 |
| Écart standard - | - 0,10 | 4,26 | 3,11 | 7,95 | 6,55 | 2,48 | 1,02 | 16,13 | 2,12 | 5,30 | 5,30 | 2,53 |
| Tomis | 5,64 | 6,72 | 6,80 | 17,15 | 9,18 | 4,85 | 3,15 | 20,20 | 7,23 | 8,50 | 4,81 | 5,70 |

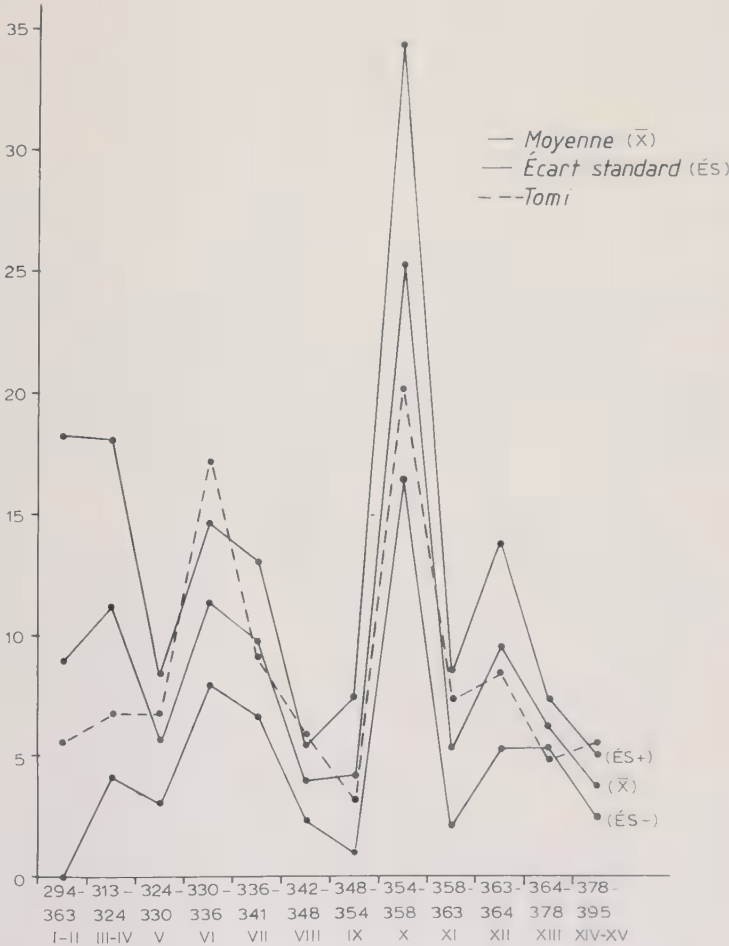


Fig. 3. Dobroudja. Représentation du modèle statistique pour le IVE siècle.

5 Gh. POENARU BORDEA, R. OCHEȘEANU et E. NICOLAE, *Aksiopolis od III do VII vijeka naše ere u svjetlu monetarnih otkrića*, dans *Numizmatika*, Zagreb, VII, 1, 1988, p. 26-45; ID., *Axiopolis aux IIIe-VIIe siècles de n. è. à la lumière des découvertes monétaires*, dans *SCN*, 9, 1989, p. 53-73, avec un commentaire statistique pour la Dobroudja de 270 à 450.

6 C. PREDA et H. NUBAR, *Histria III. Descoperirile monetare 1914-1970*, Bucarest, 1973, p. 171-190, 195-197; Gh. POENARU BORDEA, *Monnaies*, dans Al. SUCEVEANU, *Histria*, VI. *Les thermes romains*, Bucarest, 1982, p. 149-166.

82 ex.⁷; Tropaeum Traiani : 346 ex.⁸; Nord de la Dobroudja : 182 ex.⁹; Tomis : 840 ex. Nous avons été obligés d'opérer avec les périodes I-II, III-IV et XIV-XV cumulées (tabl. II-III, fig. 3). On peut constater que, dans les grandes lignes, la courbe obtenue pour Tomis s'intègre assez bien dans la tendance générale des courbes du modèle obtenu pour la Dobroudja. Les écarts positifs ou négatifs face à la moyenne se situant dans les limites des écarts standards, à l'exception des périodes 330-336 (le plus grand dépassement positif), 342-348 (un peu au-dessus de l'ES +), 364-378 (un peu au-dessous de l'ES -) et 378-395 (un peu au-dessus de l'ES +).

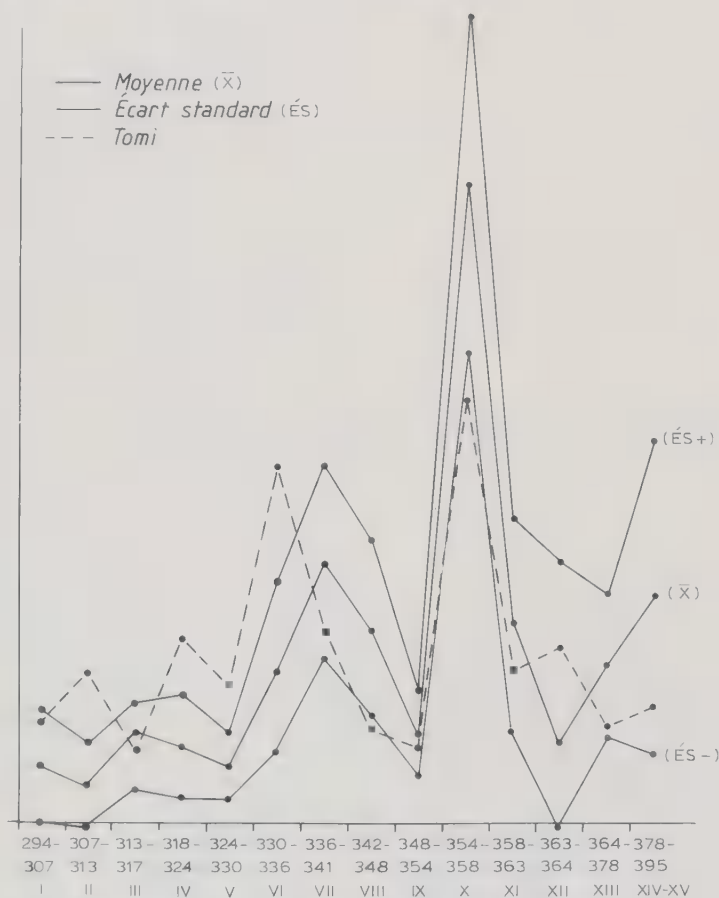


Fig. 4. Empire romain. Représentation statistique du modèle pour le IV^e siècle.

Pour nous faire une idée de la situation de la circulation monétaire au niveau de l'Empire romain, nous avons utilisé les données de Conimbriga : 4.837 ex.¹⁰; Brigetio :

⁷ E. OBERLÄNDER-TÂRNOVEANU, *Monede antice și bizantine descoperite la Troemis*, dans *Peuce*, 8, 1980, p. 248-280.

⁸ R. OCHEȘEANU, *Monede antice și bizantine descoperite la Tropaeum Traiani*, mss., 1976.

⁹ Gh. POENARU BORDEA et V.H. BAUMANN, *Monede romane și bizantine provenite din Nordul Dobrogei*, dans *Peuce*, 4, 1973-1975, p. 133-183.

¹⁰ I. PEREIRA, J.-P. BOST et J. HIERNARD, *Fouilles de Conimbriga. Les monnaies*, III, Paris, 1974.

TABLEAU IV. EMPIRE ROMAIN. ANALYSE DES ÉCHANTILLONS DU IVE SIÈCLE

| Conimbriga | | | | | | Brigetio | | | Athènes-Agora | | | Corinthe | | | | |
|------------|----------------|----------------------------|------------------------------|---------------|------------------------------|------------------------------|---------------|------------------------------|------------------------------|---------------|------------------------------|------------------------------|---------------|------------------------------|------------------------------|--------|
| N° | Étape | Durée de l'époque (années) | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | | |
| I | 294-307 | 13 | 30 | 2,30 | 0,26 | 38 | 2,82 | 1,53 | 234 | 24,82 | 1,78 | 85 | 6,53 | 2,00 | | |
| II | 307-313 | 6 | 30 | 5,00 | 0,58 | 33 | 5,50 | 2,99 | 25 | 4,16 | 0,29 | 14 | 2,33 | 0,71 | | |
| III | 313-317 | 4 | 54 | 13,50 | 1,58 | 53 | 13,25 | 7,21 | 47 | 11,75 | 0,84 | 21 | 5,25 | 1,61 | | |
| IV | 318-324 | 7 | 89 | 12,71 | 1,48 | 60 | 8,57 | 4,66 | 166 | 23,71 | 1,70 | 47 | 6,71 | 2,05 | | |
| V | 324-330 | 6 | 30 | 5,00 | 0,58 | 31 | 5,16 | 2,80 | 101 | 16,83 | 1,20 | 39 | 6,50 | 1,99 | | |
| VI | 330-336 | 6 | 160 | 26,66 | 3,12 | 110 | 18,33 | 9,97 | 331 | 55,16 | 3,96 | 81 | 13,50 | 4,14 | | |
| VII | 336-341 | 5 | 913 | 182,60 | 21,40 | 81 | 16,20 | 8,82 | 601 | 120,20 | 8,64 | 155 | 31,00 | 9,51 | | |
| VIII | 342-348 | 7 | 951 | 135,85 | 15,92 | 41 | 5,85 | 3,18 | 900 | 128,57 | 9,24 | 217 | 31,00 | 9,51 | | |
| IX | 348-354 | 6 | 178 | 29,66 | 3,47 | 85 | 14,16 | 7,70 | 136 | 22,66 | 1,62 | 107 | 17,83 | 5,47 | | |
| X | 354-358 | 4 | 1285 | 321,25 | 37,65 | 130 | 32,50 | 17,69 | 1785 | 446,25 | 32,08 | 438 | 109,50 | 33,59 | | |
| XI | 358-361/3 | 4 | 265 | 66,25 | 7,76 | 9 | 2,25 | 1,22 | 851 | 212,75 | 15,29 | 84 | 21,00 | 6,44 | | |
| XII | 363-364 | 1 | 0 | 0 | 0 | 35 | 35,00 | 19,05 | 64 | 64,00 | 4,60 | 22 | 22,00 | 6,75 | | |
| XIII | 364-378 | 15 | 288 | 19,20 | 2,25 | 289 | 19,26 | 10,48 | 1236 | 82,40 | 5,92 | 269 | 17,93 | 5,50 | | |
| XIV | 378-395 | 17 | 564 | 33,17 | 3,88 | 82 | 4,82 | 2,62 | 3021 | 177,70 | 12,77 | 592 | 34,82 | 10,68 | | |
| | | | 4837 | 853,15 | | 1077 | 183,67 | | 9498 | 1390,96 | | 2171 | 325,90 | | | |
| Sardes | | | Antioche | | | Curium | | | Gerasa | | | Tomis | | | | |
| N° | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de mon. | Coef. mon./an | % du total des coef. mon./an | Nb de mon. | Coef. mon./an | % du total des coef. mon./an | Nb de mon. | Coef. mon./an | % du total des coef. mon./an | Nb de mon. | Coef. mon./an | % du total des coef. mon./an | |
| I | 18 | 1,38 | 8,37 | 192 | 14,76 | 1,84 | 24 | 1,84 | 1,47 | 4 | 0,30 | 0,34 | 75 | 5,76 | 4,36 | |
| II | 1 | 0,16 | 0,97 | 32 | 5,33 | 0,66 | 10 | 1,66 | 1,33 | 3 | 0,50 | 0,57 | 51 | 8,50 | 6,44 | |
| III | 3 | 0,75 | 4,55 | 128 | 32,00 | 3,99 | 14 | 3,50 | 2,80 | 13 | 3,25 | 3,73 | 15 | 3,75 | 2,84 | |
| IV | 7 | 1,00 | 6,07 | 113 | 16,14 | 2,01 | 20 | 2,85 | 2,28 | 9 | 1,28 | 1,47 | 72 | 10,28 | 7,79 | |
| V | 3 | 0,50 | 3,03 | 81 | 13,50 | 1,68 | 12 | 2,00 | 1,60 | 12 | 2,00 | 2,30 | 48 | 8,00 | 6,06 | |
| VI | 6 | 1,00 | 6,07 | 307 | 51,16 | 6,38 | 35 | 5,83 | 4,67 | 25 | 4,16 | 4,78 | 121 | 20,16 | 15,28 | |
| VII | 8 | 1,60 | 9,71 | 587 | 117,40 | 14,64 | 53 | 10,60 | 8,49 | 46 | 9,20 | 10,58 | 54 | 10,80 | 8,18 | |
| VIII | 7 | 1,00 | 6,07 | 643 | 91,85 | 11,45 | 56 | 8,00 | 6,41 | 52 | 7,42 | 8,53 | 40 | 5,71 | 4,32 | |
| IX | 2 | 0,33 | 2,00 | 125 | 20,83 | 2,59 | 37 | 6,16 | 4,93 | 15 | 2,50 | 2,87 | 26 | 4,33 | 3,28 | |
| X | 13 | 3,25 | 19,73 | 734 | 183,50 | 22,88 | 162 | 40,50 | 32,47 | 196 | 26,50 | 30,48 | 95 | 23,75 | 18,00 | |
| XI | 2 | 0,50 | 3,03 | 305 | 76,25 | 9,51 | 69 | 17,25 | 13,83 | 45 | 11,25 | 12,94 | 34 | 8,50 | 6,44 | |
| XII | 0 | 0 | 0 | 61 | 61,00 | 7,60 | 5 | 5,00 | 4,00 | 0 | 0 | 0 | 10 | 10,00 | 7,58 | |
| XIII | 15 | 1,00 | 6,07 | 1081 | 72,06 | 8,98 | 237 | 15,80 | 12,66 | 65 | 4,33 | 4,98 | 85 | 5,66 | 4,29 | |
| XIV | 68 | 4,00 | 24,28 | 781 | 45,94 | 5,73 | 123 | 7,23 | 5,79 | 242 | 14,23 | 16,37 | 114 | 6,70 | 5,07 | |
| | | | 153 | 16,47 | | 5170 | 801,72 | | 857 | 124,72 | | 637 | 86,92 | | 840 | 131,90 |

1.077 ex.¹¹; l'Agora d'Athènes : 9.498 ex.¹²; Corinthe : 2.171 ex.¹³; Sardes : 153 ex.¹⁴; Antioche : 5.170 ex.¹⁵; Curium : 857 ex.¹⁶; Gerasa : 637 ex.¹⁷ et Tomis : 840 ex. (tabl. IV-V, fig. 4). Les périodes XIV-XV ont été cumulées.

TABLEAU V. EMPIRE ROMAIN. MODÈLE STATISTIQUE POUR LE IV^E SIÈCLE

| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV-XV |
|---------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|---------|
| | 294-307 | 307-313 | 313-317 | 318-324 | 324-330 | 330-336 | 336-341 | 342-348 | 348-354 | 354-358 | 358-361/3 | 363-364 | 364-378 | 378-395 |
| Moyenne (X) | 2,43 | 1,61 | 3,23 | 3,27 | 2,36 | 6,48 | 11,10 | 8,29 | 3,77 | 27,17 | 8,49 | 5,50 | 6,79 | 9,68 |
| Écart standard + Écart standard | 4,81 | 3,48 | 5,05 | 5,46 | 3,85 | 10,12 | 15,18 | 11,95 | 5,59 | 34,33 | 13,07 | 11,16 | 9,88 | 16,38 |
| Tomis | 0,06 | -0,24 | 1,41 | 1,08 | 0,86 | 2,84 | 7,02 | 4,62 | 1,94 | 20,01 | 3,9 | -0,14 | 3,70 | 2,98 |
| | 4,36 | 6,44 | 2,84 | 7,79 | 6,06 | 15,28 | 8,18 | 4,32 | 3,28 | 18,00 | 6,44 | 7,58 | 4,29 | 5,07 |

La courbe de Tomis ne coïncide plus cette fois-ci que de manière relative avec les tendances générales des courbes du modèle obtenu pour l'Empire¹⁸. On peut remarquer d'abord que pour les périodes 294-307 à 330-336, à l'exception de celle de 313 à 317, nous avons des valeurs nettement au-dessus de l'ES +, pour constater, entre 336 et 341 – qui représente le deuxième sommet pour l'Empire – une baisse au-dessous de la moyenne, et nous trouver durant la période suivante, 342-348, même au-dessous de L'ES – situation qui se retrouve à l'heure du pic le plus haut, de 354 à 358. Plus tard, avec des variations différentes face à la moyenne dans le sens positif ou négatif, nous nous trouvons dans les limites de l'intervalle de confiance.

En dépit de la présence de quelques trésors (Durostorum, aujourd'hui Silistra, dernières monnaies 294-305, avec un terminus tout de suite après 294¹⁹; Pădureni,

- 11 K. BÍRÓ-SEY, *Coins from Identified Sites of Brigetio and the Question of Local Currency*, Budapest, 1977.
- 12 M. THOMPSON, *The Athenian Agora, 2. Coins from the Roman through the Venetian Period*, Princeton, N.J., 1954.
- 13 K.M. EDWARDS, *Corinth. Result of Excavations Conducted by the American School of Classical Studies at Athens. VI. The Coins, 1896-1920*, Cambridge, Mass., 1933; voir aussi A.R. BELLINGER, *Catalogue of the Coins Found at Corinth, 1925*, New Haven, 1930; J.E. FISHER, *Excavations at Corinth, 1973. Appendix II : Coins*, dans *Hesperia*, 1974, p. 46-76.
- 14 H.W. BELL, *Sardis. XI. Coins, part 1, 1910-1914*, Leiden, 1916.
- 15 D.B. WAAGE, *Antioch on the Orontes, IV, part 2. Greek, Roman, Byzantine and Crusader's Coins*, Princeton, N.J., 1952.
- 16 D.H. COX, *Coins from the Excavation at Curium, 1932-1953 (NNM, 145)*, New York, 1959.
- 17 A.R. BELLINGER, *Coins from Jerash, 1928-1934 (NNM, 81)*, New York, 1938.
- 18 Cf. aussi pour l'Occident R. REECE, *Roman Coinage in Southern France*, dans *NC*, s. 7, 7, 1967, p. 91-105; ID., *Roman Coinage in Northern Italy*, dans *NC*, s. 7, 11, 1971, p. 167-179; ID., *Roman Coins in Northern France and the Rhine Valley*, dans *NC*, s. 7, 12, 1972, p. 159-165; ID., *A Short Survey of the Roman Coins Found on Fourteen Sites in Britain*, dans *Britannia*, 3, 1972, p. 269-276; ID., *Roman Coinage in the Western Empire*, dans *Britannia*, 4, 1973, p. 227-251. Voir en général J.-P. CALLU, *La circulation monétaire de 313 à 348*, dans *Actes du 8e Congrès International de Numismatique*, New York, Washington, sept. 1973, Paris-Basel, 1976, p. 227-242 et ID., *Rôle et distribution des espèces de bronze de 348 à 392*, dans *Imperial Revenue, Expenditure and Monetary Policy in the Fourth Century AD (BAR - International Series, 76)*, éd. C.E. KING, Oxford, 1980, p. 41-93; pour des régions plus proches, A.Sz. BURGER, *Late Roman Money Circulation in South-Pannonia*, dans *Régészeti Füzetek*, ser. II, n°22, Magyar Nemzeti Múzeum (Budapest), 1981; M. VASIĆ, *The Circulation of Bronze Coinage at the End of the 4th and Beginning of the 5th Centuries in Moesia Prima and Pannonia Secunda*, dans *Studia Numismatica Labacensia Alexander Jeločnik oblata*, Ljubljana, 1988, p. 165-184, avec des méthodes statistiques différentes.
- 19 P. PAPAHAĞI, *Un tezaur de monete romane imperiale găsit în Silistra*, dans *CNA*, 18, 129, 1944, p. 210-220.

terminus 308/309²⁰; et Arrubium, aujourd'hui Măcin, terminus 324/325²¹), la pénétration monétaire à Tomis et en Dobroudja dans son ensemble se situe à des niveaux plus élevés que dans le reste de l'Empire, formant même un pic en 330-336, ce qui montre que les incursions gothiques de 331 et 332²², pas encore confirmées dans les trésors, n'ont pas eu de conséquences négatives sur ce plan.

Un trésor de Tomis récemment étudié, datant de la fin de la dernière période envisagée (même s'il semble constitué dans l'ouest de la Roumanie²³), pourrait expliquer la chute enregistrée pendant la période 336-341, quand l'Empire connaît une période très favorable. D'autre part, le trésor de Niculițel (lieu-dit Sarica), avec un terminus du début de la période 342-348²⁴, même s'il ne peut être relié à un événement politico-militaire connu, pourrait expliquer la décroissance constatée en Dobroudja (même si à Tomis nous trouvons au-dessus de l'ES +), car par rapport à l'Empire, la cité de Tomis (donc, également la Dobroudja), se trouve au-dessous de l'ES -. La croissance de la période 354-358 quand, aussi bien en Dobroudja que dans l'ensemble de l'Empire, nous rencontrons le plus haut pic de la circulation monétaire, semble avoir une valeur moins grande à Tomis.

Pour le début de la période 364-378, nous disposons du trésor de Tatlageac²⁵ que l'on peut mettre en rapport avec un autre de siliques, toujours en Dobroudja²⁶ (on ne peut le localiser de façon plus précise), trésors dus vraisemblablement à des incursions gothiques, de nature à expliquer éventuellement la présence du petit numéraire à Tomis. En 375 se place le passage des Goths dans notre région comme *foederati* de l'Empire, et leur révolte est suivie par le désastre d'Andrinople de 378, moment illustré par deux trésors au moins : le premier retrouvé à Straja²⁷ et le second provenant d'un endroit non précisé de la Dobroudja²⁸, trésors auxquels pourraient s'ajouter quelques autres encore (Nalbant²⁹ et Babadag, lieu-dit Podul de la Topraichioi I³⁰).

20 Inédit. À l'Institut d'Archéologie de Bucarest, inv. n°235 (Al. Saint-Georges).

21 Em. CONDURACHI, *Tezaurul de monete argintate de la Măcin*, dans *Hrisovul*, 1, 1941, p. 77-99; R. OCHEȘEANU, *Tezaurul de nummii constantinieni de la Arrubium (1908)*, contribuții la cunoașterea circulației monetare în Scythia Minor între anii 318-324, dans *Peuce*, 10, 1991, p. 417-445.

22 R. VULPE et I. BARNEA, *Din istoria Dobrogei*, II, Bucarest, 1968, p. 388-389 (I. BARNEA), où sont signalées aussi d'autres attaques en 315-316 et 323.

23 Gh. POENARU BORDEA, R. OCHEȘEANU, A. SMARANDA et A. DIACONU, *Un tezaur de monede de bronz din vremea împăratului Constantin cel Mare descoperit la Tomis*, dans *Pontica*, 23, 1990, p. 267-275.

24 R. OCHEȘEANU, *Depozitul monetar de la Sarica-Niculițel*, dans *BSNR*, 75-76, 1981-1982, p. 209-235.

25 C. BUZDUGAN, *Tezaurul de la Tatlageac*, dans *CNA*, 17, 127-128, 1943, p. 168-170; cf. A. VERTAN et R. OCHEȘEANU, *Tezaurul de monede romane târzii de la Straja (jud. Constanța)*, dans *Pontica*, 20, 1987, p. 172-173.

26 L. RUZICKA, *Siliquefund in der Dobrogea (Rumänien)*, dans *Blätter für Münzfreunde*, 4, 1923, p. 1-7 (tiré à part); R. OCHEȘEANU, *Cîteva descoperiri monetare din secolul IV e.n. în Scythia Minor*, dans *Pontica*, 17, 1984, p. 146-170.

27 A. VERTAN et R. OCHEȘEANU, *Tezaurul de monede romane târzii de la Straja (jud. Constanța)*, dans *Pontica*, 20, 1987, p. 147-179.

28 R. OCHEȘEANU, *Cîteva descoperiri monetare din secolul IV e.n. în Scythia Minor*, dans *Pontica*, 17, 1984, p. 136-146.

29 Const. MOISIL, *Monete și tezaure monetare găsite în România și în Ținuturile românești învecinate (Vechiul teritoriu geto-dac)*, dans *BSNR*, 11, 22, 1914, p. 55, n°42.

30 Gh. POENARU BORDEA, *Fortificația și așezarea romană târzie de la Babadag-Topraichioi, VIII. Monedele*, dans *Peuce*, 10, 1991, p. 296-307.

TABLEAU VI. EMPIRE ROMAIN. ANALYSE DES ÉCHANTILLONS DU V^e SIÈCLE

| N° | Étape | Durée de l'époque (années) | Antioche | | | Athènes | | | Corinthe | | |
|-------|---------|----------------------------|----------------|---------------|------------------------------|----------------|---------------|------------------------------|----------------|---------------|------------------------------|
| | | | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an |
| XVI | 395-402 | 7 | 522 | 74,57 | 32,56 | 63 | 9,00 | 6,80 | 7 | 1,00 | 9,48 |
| XVII | 402-408 | 6 | 697 | 116,16 | 50,72 | 291 | 48,50 | 36,68 | 37 | 6,16 | 58,44 |
| XVIII | 408-425 | 17 | 50 | 2,94 | 1,28 | 136 | 8,00 | 6,05 | 11 | 0,64 | 6,07 |
| XIX | 425-450 | 25 | 440 | 17,60 | 7,68 | 235 | 9,40 | 7,10 | 16 | 0,64 | 6,07 |
| XX | 450-457 | 6 | 41 | 6,83 | 2,98 | 107 | 17,83 | 13,48 | 9 | 1,50 | 14,23 |
| XXI | 457-474 | 17 | 24 | 1,41 | 0,61 | 153 | 9,00 | 6,80 | 6 | 0,35 | 3,32 |
| XXII | 474-491 | 17 | 8 | 0,47 | 0,20 | 2 | 0,11 | 0,08 | 0 | 0 | 0 |
| XXIII | 491-498 | 8 | 72 | 9,00 | 3,93 | 243 | 30,37 | 22,97 | 2 | 0,25 | 2,37 |

| N° | Étape | Durée de l'époque (années) | Curium | | | Tomis | | | Tropaeum Traiani | | |
|-------|---------|----------------------------|----------------|---------------|------------------------------|----------------|---------------|------------------------------|------------------|---------------|------------------------------|
| | | | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an | Nb de monnaies | Coef. mon./an | % du total des coef. mon./an |
| XVI | 395-402 | 7 | 145 | 20,71 | 48,02 | 63 | 9,00 | 45,61 | 16 | 2,28 | 22,50 |
| XVII | 402-408 | 6 | 94 | 15,66 | 36,31 | 31 | 5,16 | 26,15 | 17 | 2,83 | 27,93 |
| XVIII | 408-425 | 17 | 16 | 0,94 | 2,17 | 34 | 2,00 | 10,13 | 9 | 0,52 | 5,13 |
| XIX | 425-450 | 25 | 16 | 0,64 | 1,48 | 51 | 2,04 | 10,33 | 37 | 1,48 | 14,61 |
| XX | 450-457 | 6 | 12 | 2,00 | 4,63 | 5 | 0,83 | 4,20 | 7 | 1,16 | 11,45 |
| XXI | 457-474 | 17 | 28 | 1,64 | 3,80 | 5 | 0,29 | 1,46 | 17 | 1,00 | 9,87 |
| XXII | 474-491 | 17 | 7 | 0,41 | 0,95 | 7 | 0,41 | 2,07 | 2 | 0,11 | 1,08 |
| XXIII | 491-498 | 8 | 9 | 1,12 | 2,59 | 0 | 0 | 0 | 6 | 0,75 | 7,40 |

La situation créée dans la Scythie Mineure fut particulièrement grave, comme l'indiquent aussi les trésors de Strunga³¹ et de Medgidia³². On constate la rentrée dans la circulation de monnaies des Ier-IIIe s. (?) présentes dans les trésors et une chute catastrophique du nombre de monnaies introduites durant l'étape 378-383 (fig. 1 et 2). La situation redevient normale dès 383-395 mais le niveau pour les périodes XIV-XV cumulées, 378-395, se trouve bien entendu influencé d'une façon négative par ce qui se passe dans la première sous-période. Les deux trésors de cette période, découverts à Babadag, lieu-dit Podul de la Topraichioi³³, ne semblent pas refléter des événements de nature à influencer la circulation monétaire d'une manière négative.

Nous trouvons pour le moment dans l'impossibilité de réaliser un échantillon cumulé pour la Dobroudja – les seules cités où les monnaies couvrent d'une manière satisfaisante le Ve s. étant Tropaeum Traiani (111 ex.) et Tomis (196 ex.) – nous avons calculé une moyenne pour l'Empire en ajoutant aussi les données obtenues sur base des matériaux d'Athènes (1.230 ex.), Corinthe (88 ex.), Curium (327 ex.) et Antioche (1.854 ex.), toutes cités de l'Empire romain d'Orient (tabl. VI-VII, fig. 5).

Après une légère hausse en 395-402 par rapport à 383-395 (plus accentuée si l'on considère l'intervalle 378-395 dans son ensemble), en 402-408 nous enregistrons une chute contrastant avec la courbe pour l'Empire, Tomis se situant au-dessous de l'ES.

La décroissance continue entre 408 et 425, même si nous nous situons un peu au-dessus de l'ES +. La courbe se maintient à une valeur à peu près constante en 425-450, au-dessous de la moyenne de l'Empire, pour se situer ensuite sous la moyenne, dans les limites de l'ES -, à l'exception de la période couvrant le règne de Zénon (474-491), quand elle se place un peu sous l'ES +.

Par rapport aux situations fournies par le matériel identifié et en conséquence utilisé par nous, il est possible que la réalité ait été un peu moins sombre, si l'on pense aux grandes difficultés d'identification des *minimi* et à leur manque de pouvoir d'attraction sur les collectionneurs, qui ont sans doute joué un rôle dans le cas de Tomis. Même en tenant compte de ces circonstances, la comparaison de la situation de la ville avec celle de l'Empire montre une certaine similitude, les décroissances après 450-457 étant communes.

TABLEAU VII. EMPIRE ROMAIN. MODÈLE STATISTIQUE POUR LE VE SIÈCLE

| | XVI 395- 402 | XVII 402- 408 | XVIII 408- 425 | XIX 425- 450 | XX 450- 457 | XXI 457- 474 | XXII 474- 491 | XXIII 491- 498 |
|---------------------|--------------------|---------------------|----------------------|--------------------|-------------------|--------------------|---------------------|----------------------|
| Moyenne (X) | 27,49 | 39,37 | 5,13 | 7,87 | 8,49 | 4,31 | 0,73 | 6,54 |
| Écart standard + | 43,58 | 51,02 | 8,03 | 11,88 | 13,15 | 7,47 | 1,46 | 14,21 |
| Écart standard - | 11,40 | 27,71 | 2,24 | 3,87 | 3,83 | 1,14 | 0 | - 1,12 |
| Tomis | 45,61 | 26,15 | 10,13 | 10,33 | 4,20 | 1,46 | 2,07 | 0 |

La chute de 402-408 contrastant nettement avec la courbe pour l'Empire, peut s'expliquer dans le contexte de l'action des Huns, illustrée par trois trésors, deux à Tomis

³¹ O. ILIESCU, *Însemnări privitoare la descoperiri monetare (II)*, dans *SCN*, 2, 1958, p. 453, n°10.

³² R. OCHEȘEANU et A. DUMITRAȘCU, *Un tezaur de la Theodosius I, descoperit la Medgidia*, dans *Pontica*, 5, 1972, p. 537-546; voir aussi R. OCHEȘEANU et Gh. PAPUC, *Monede grecești, romane și bizantine, descoperite în Dobrogea II*, dans *Pontica*, 6, 1973, p. 374-375, n°221-236 : un petit trésor de Sacidava avec la dernière monnaie de 378-383 (?).

³³ Gh. POENARU BORDEA, *Fortificația și așezarea romană tirzie de la Babadag-Topraichioi, VIII. Monedele*, dans *Peuce*, 10, 1991, p. 307-309.

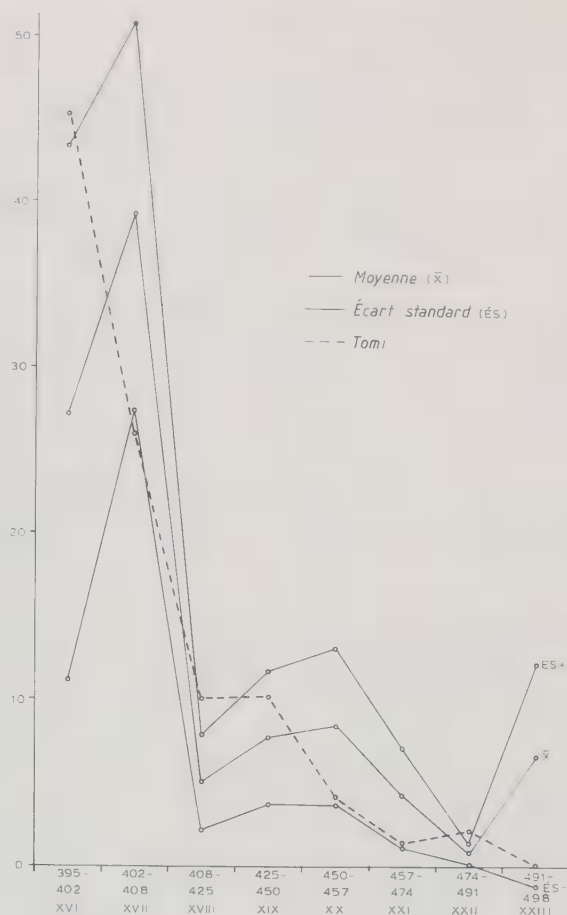


Fig. 5. Empire romain. Représentation statistique du modèle pour le Ve siècle.

– le premier *intra muros*³⁴, le second *extra muros*³⁵ – et un autre à Babadag, lieu-dit Podul de la Topraichioi³⁶, avec le point final en 402 environ. Même si nous nous trouvons au-dessus de la moyenne en 408-425 et 425-450, la Dobroudja continue d'être affectée par les raids huniques, comme l'indiquent le trésor de Beștepe³⁷, près de Salsovia, et celui de Babadag, lieu-dit Podul de la Topraichioi³⁸, ayant leur point final vers 423/425. Mentionnons aussi dans le même contexte le trésor d'Ulmetum³⁹, en relation avec les attaques des Huns en 441, 443 ou 447. Suivent, vers la fin du règne de

34 ID., *Note numismatice Dobrogeane*, dans *SCN*, 4, 1968, p. 399, 401-402; R. OCHEȘEANU, *Un depozit de monede romane descoperit în Constanța*, dans *BSNR*, 67-69, 1973-1975, p. 105-111.

35 ID. et P.I. DICU, *Monede antice și bizantine din Dobrogea*, dans *BSNR*, 75-76, 1981-1982, p. 451-453.

36 Gh. POENARU BORDEA, *Fortificația și așezarea romană târzie de la Babadag-Topraichioi, VIII. Monedele*, dans *Peuce*, 10, 1991, p. 309-316.

37 ID. et R. OCHEȘEANU, *Tezaurul de monede romane târzie descoperit la Beștepe*, dans *Pontica*, 23, 1990, p. 277-314.

38 Gh. POENARU BORDEA, *Fortificația și așezarea romană târzie de la Babadag-Topraichioi, VIII. Monedele*, dans *Peuce*, 10, 1991, p. 316-318.

39 ID., R. OCHEȘEANU et E. NICOLAE, *Le trésor de monnaies du Bas-Empire romain découvert à Ulmetum en 1912*, dans *RIN*, 90, 1988, p. 295-328.

Léon, deux autres trésors monétaires : à Mircea Vodă⁴⁰ et à Tomis, l'édifice à mosaïques⁴¹.

Il nous semble utile de montrer que si pour le IV^e s. nous avons en Dobroudja des découvertes provenant de 102 localités, pour la première moitié du Ve s., on compte 23 localités et pour la deuxième moitié du même siècle, seulement 16.

En ce qui concerne la représentation des ateliers monétaires sur le marché de Tomis (tabl. VIII, fig. 6), il faut d'abord préciser que nous avons eu à notre disposition 640 monnaies réparties de la manière suivante : 561 ex. pour 294-395 et 79 ex. pour 395-491. Pour les IV^e-Ve s. sont représentés 14 ateliers : Trèves, Arles, Rome, Ticinum, Aquilée, Siscia, Sirmium, Thessalonique, Héraclée, Constantinople, Nicomédie, Cyzique, Antioche et Alexandrie. Nous trouvons en tête les ateliers d'Héraclée avec 153 ex., Constantinople avec 140 ex., Cyzique avec 118 ex. et Nicomédie avec 69 ex.

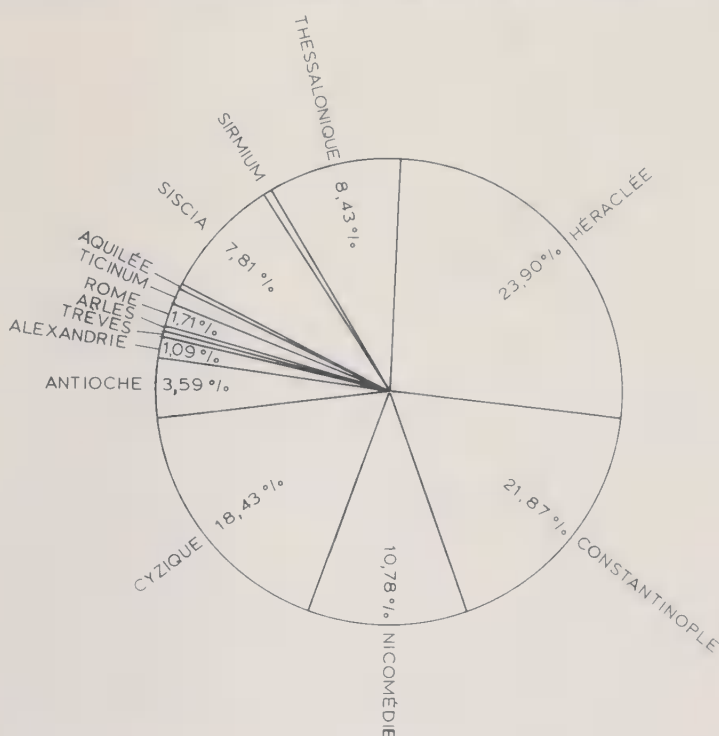


Fig. 6. Ateliers monétaires représentés à Tomis aux IV^e-Ve siècles.

Les ateliers de la Propontide représentent un pourcentage cumulé de 74,84 %. La situation pour les IV^e-Ve s. est similaire à celle pour le IV^e s. (tabl. VIII, fig. 7). En ce qui concerne cette dernière, nous trouvons en première position Héraclée (26,38 %) suivie par Constantinople (18,18 %), Cyzique (17,64 %) et Nicomédie (10,69 %). Les ateliers de la Propontide totalisent 72,89 % et, si nous ajoutons Thessalonique (9,09 %) qui n'est pas très éloignée, nous obtenons 81,98 %. Le seul atelier qui compte en dehors de ceux déjà cités est celui de Siscia (8,91 %), les autres ayant une présence plus ou moins aléatoire. Précisons aussi que la production d'Héraclée domine sur le marché de notre ville jusqu'en 342-348 et que pour la période suivante, nous trouvons en tête, en règle générale, l'atelier diocésain de Constantinople, à l'exception de la période 354-358, quand Siscia se trouve en tête.

⁴⁰ C. MOISIL, *Monete și tezaure monetare găsite în România și în Ținuturile românești învecinate (Vechiul teritoriu geto-dac)*, dans *BSNR*, 10, 19, 1913, p. 21, n°7; R. OCHEȘEANU, *Tezaurul de monede romane tîrzii de la Mircea Voda (jud. Constanța)*, dans *BSNR*, 70-74, 1976-1980, p. 231-237.

⁴¹ Inédit. Au Musée de Constanța; Al. POPEEA et R. OCHEȘEANU (mss.).

TABLEAU VIII. ATELIERS MONÉTAIRES À TOMIS AUX IV^e-V^e SIÈCLES

| N° | Atelier | I 294- 307 | II 307- 313 | III 313- 317 | IV 317- 324 | V 324- 330 | VI 330- 336 | VII 336- 341 | VIII 342- 348 | IX 348- 354 | X 354- 358 | XI 358- 363 | XII 363- 364 | XIII 364- 378 |
|------|----------------|------------------|-------------------|--------------------|-------------------|------------------|-------------------|--------------------|---------------------|-------------------|------------------|-------------------|--------------------|---------------------|
| I | Trèves | | | | 1 | | 1 | | | | | | | |
| | % | | | | 1,56 | | 0,91 | | | | | | | |
| II | Arles | | | | 2 | | | | | | | | | |
| | % | | | | 3,12 | | | | | | | | | |
| III | Rome | 1 | 2 | 3 | | | 2 | | | 1 | | | | |
| | % | 1,47 | 4,25 | 20,00 | | | 1,83 | | | 7,69 | | | | |
| IV | Ticinum | 1 | | 1 | | 3 | | | | | | | | |
| | % | 1,47 | | 1,66 | | 6,81 | | | | | | | | |
| V | Aquilée | | | | | | | 1 | | | 1 | | | |
| | % | | | | | | | 2,70 | | | 2,85 | | | |
| VI | Siscia | 1 | 1 | 3 | 16 | 3 | 4 | 1 | 2 | | 8 | | | 10 |
| | % | 1,47 | 2,12 | 20,00 | 25,00 | 6,81 | 3,66 | 2,70 | 10,52 | | 22,85 | | | 24,39 |
| VII | Sirmium | | | | | | | | | | 3 | | | |
| | % | | | | | | | | | | 8,57 | | | |
| VIII | Thessalonique | 2 | 8 | 1 | 2 | 3 | 11 | 8 | 5 | | 3 | 1 | | 1 |
| | % | 2,94 | 17,02 | 6,66 | 3,12 | 6,81 | 10,09 | 21,62 | 26,31 | | 8,57 | 25,00 | | 2,43 |
| IX | Héraclée | 43 | 14 | 1 | 25 | 8 | 31 | 7 | 3 | 2 | 5 | | 1 | 5 |
| | % | 63,23 | 29,78 | 6,66 | 39,06 | 18,18 | 28,44 | 18,91 | 15,78 | 15,38 | 14,28 | | 14,28 | 12,19 |
| X | Constantinople | | | | | 3 | 20 | 7 | 2 | 9 | 6 | 2 | 6 | 18 |
| | % | | | | | 6,81 | 18,34 | 18,91 | 10,52 | 69,23 | 17,14 | 25,00 | 85,71 | 43,90 |
| XI | Nicomédie | | 11 | 3 | 7 | 7 | 13 | 2 | 2 | 1 | 4 | 1 | | 4 |
| | % | | 23,40 | 20,00 | 10,93 | 15,90 | 11,92 | 5,40 | 10,52 | 7,69 | 11,42 | 12,50 | | 9,75 |
| XII | Cyzique | 18 | 9 | 3 | 9 | 15 | 22 | 5 | 2 | | 4 | 1 | | 2 |
| | % | 26,47 | 19,14 | 20,00 | 14,06 | 34,09 | 20,18 | 13,51 | 10,52 | | 11,42 | 12,50 | | 4,87 |
| XIII | Antioche | 1 | 2 | | 2 | 2 | 4 | 3 | 3 | | | 1 | | 1 |
| | % | 1,47 | 4,25 | | 3,12 | 3,12 | 3,66 | 8,10 | 15,78 | | | 12,50 | | 2,43 |
| XIV | Alexandrie | 1 | | | | | 1 | 3 | | | 1 | | | |
| | % | 1,47 | | | | | 0,91 | 8,10 | | | 2,85 | | | |
| | | 68 | 47 | 15 | 64 | 44 | 109 | 37 | 19 | 13 | 35 | 8 | 7 | 41 |

| | XIV 378- 383 | XV 383- 395 | XVI 395- 402 | XVII 402- 408 | XVIII 408- 425 | XIX 425- 450 | XX 450- 457 | XXI 457- 474 | XXII 474- 491 | XXIII 491- 498 | Total IVe-Ve siècles | Total IVe siècle | Total Ve siècle |
|--------------------|--------------------|-------------------|--------------------|---------------------|----------------------|--------------------|-------------------|--------------------|---------------------|----------------------|----------------------------|------------------------|-----------------------|
| I Trèves | | | | | | | | | | | 2 0,31 | 2 0,35 | |
| II Arles | | | | | | | | | | | 2 0,31 | 2 0,35 | |
| III Rome | | | | 1 7,14 | | 1 8,33 | | | | | 11 1,71 | 9 1,60 | 2 2,53 |
| IV Ticinum | | | | | | | | | | | 5 0,78 | 5 0,89 | |
| V Aquilée | | | | | | | | | | | 2 0,31 | 2 0,35 | |
| VI Siscia | 1 25,00 | | | | | | | | | | 50 7,81 | 50 8,91 | |
| VII Sirmium | | | | | | | | | | | 4 0,62 | 4 0,71 | |
| VIII Thessalonique | | 5 10,00 | | | 2 20,00 | | 1 33,33 | | | | 54 8,43 | 51 9,09 | |
| IX Héraclée | | 3 6,00 | 2 6,66 | | 2 20,00 | 1 8,33 | | | | | 153 23,90 | 148 26,38 | 5 6,32 |
| X Constantinople | 3 75,00 | 26 52,00 | 15 50,00 | 4 28,57 | 2 20,00 | 6 50,00 | 1 33,33 | 3 100 | 7 100 | | 140 21,87 | 102 18,18 | 38 48,10 |
| XI Nicomédie | | 5 10,00 | 4 13,33 | | 3 30,00 | 1 8,33 | 1 33,33 | | | | 69 10,78 | 60 10,69 | 9 11,39 |
| XII Cyzique | | 9 18,00 | 7 23,33 | 8 57,14 | 1 10,00 | 3 25,00 | | | | | 118 18,43 | 99 17,64 | 19 24,05 |
| XIII Antioche | | 1 20,00 | 2 6,66 | 1 7,14 | | | | | | | 23 3,59 | 20 3,56 | 3 3,79 |
| XIV Alexandrie | | 1 20,00 | | | | | | | | | 7 1,09 | 7 1,24 | |
| | 4 | 50 | 30 | 14 | 10 | 12 | 3 | 3 | 7 | | 640 | 561 | 79 |

Au Ve s. (tabl. VIII, fig. 8), la situation est fondamentalement similaire, même si le nombre d'ateliers représentés se réduit à 7. Nous rencontrons une prédominance encore plus nette des ateliers de la Propontide (89,86 %) et nous devons signaler la présence des ateliers de Thessalonique, Antioche et Rome, le seul atelier représenté de l'Empire d'Occident.

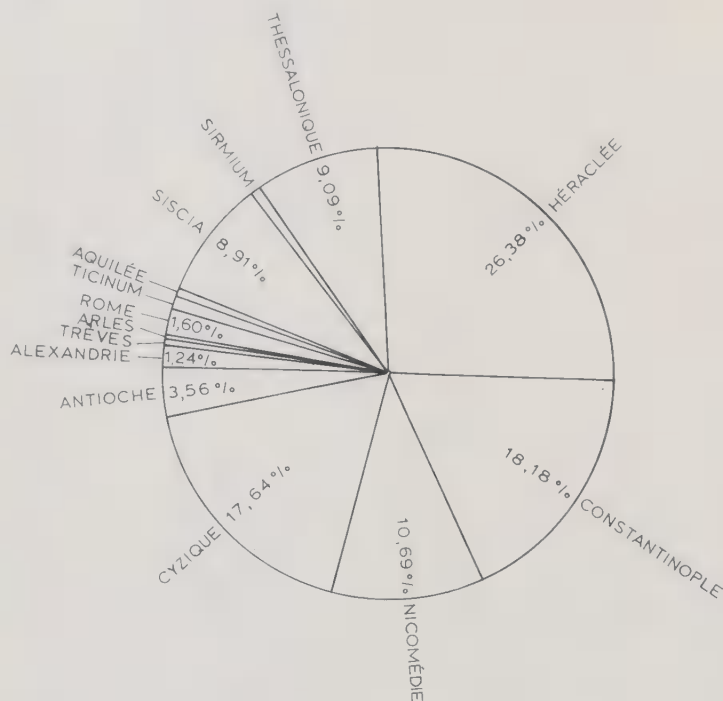


Fig. 7. Ateliers monétaires représentés à Tomis au IVe siècle.

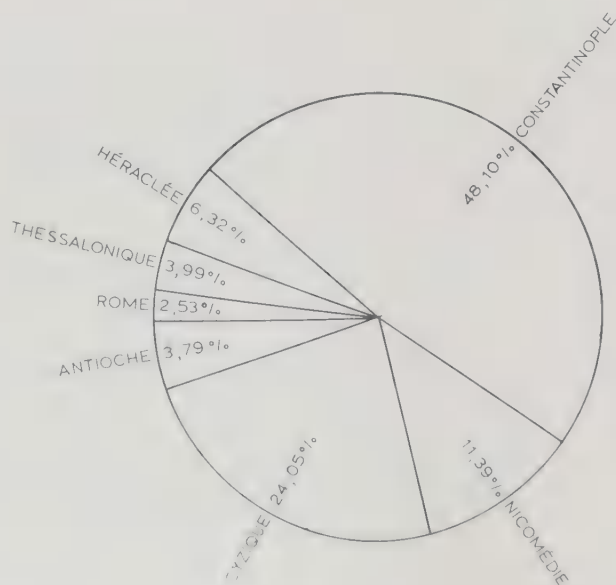


Fig. 8. Ateliers monétaires représentés à Tomis au Ve siècle.

El conjunto monetario de Valdetorres de Jarama (Madrid). Reflexiones sobre la circulación monetaria en el área central de la Península Ibérica a finales del siglo IV

Javier GIMENO*

Dentro de la profusión de estudios de circulación monetaria en la Península Ibérica que se viene observando en los años recientes, el estado de la cuestión sobre la época tardorromana puede caracterizarse por una aportación notable de nuevo material y, consiguientemente, por la necesidad de replantear determinadas cuestiones con el apoyo de los datos zonales y arqueológicos que se puedan ir precisando. El objeto de este trabajo es presentar unos datos de interés en este aspecto obtenidos a partir de la excavación y el estudio del edificio octogonal tardorromano de Valdetorres de Jarama¹ y, a continuación, sugerir algunas ideas para el planteamiento de estas cuestiones a escala peninsular. El material numismático recuperado en Valdetorres es escaso desde el punto de vista cuantitativo y las piezas son bastante usuales pero, con vistas al estudio de la circulación monetaria en el ámbito regional, ofrece un notable interés su consideración conjunta con el procedente de las excavaciones, también recientes, de *Complutum*, ciudad en cuya área de influencia debe situarse el edificio².

Este interés responde a diversos factores. En primer lugar, se trata de un área bastante poco conocida en los aspectos de circulación monetaria y que, por otra parte, constituye un enclave, si no económico, por lo menos viario dentro de la Meseta. Además, las condiciones arqueológicas del edificio de Valdetorres de Jarama ofrecen no sólo una documentación estratigráfica y topográfica precisas de cada una de las piezas sino también una realidad cronológica bastante reducida y, por tanto, la posibilidad de acotar con cierta precisión el ámbito topográfico y cronológico del estudio y plantear la situación a partir de ello. Es importante insistir en este punto ya que, frecuentemente, los estudios de circulación se basan en un esquema en cierto modo inverso – quizá en algunos casos porque las condiciones arqueológicas no permiten otro planteamiento – y, como consecuencia, quedan limitados a los aspectos de abastecimiento de numerario. La aportación esencial de Valdetorres en este sentido será un carácter complementario respecto al conjunto, más amplio, de *Complutum*, que permitirá precisar bastantes cuestiones y obtener efectivamente conclusiones válidas para el estudio de la zona y su valoración en un contexto más amplio.

Debe señalarse que todos los hallazgos monetarios son aislados, es decir, no se detectan concentraciones o atesoramientos observables, por lo que, aparte de una salvedad que se indicará, se trata en todos los casos de piezas en circulación en el momento de su pérdida. Ello permite matizar la valoración cuantitativa del conjunto ya que, si en términos absolutos puede hablarse de escasez, se trata sin embargo de valores habituales en contextos de este tipo y dimensiones. El edificio, por otra parte, se excavó en su totalidad, por lo que puede considerarse que el material recogido representa la totalidad de piezas del yacimiento.

El contexto topográfico de Valdetorres viene dado sin duda por la relación con la ciudad de *Complutum*, estructurada por el eje N-S que constituye el curso del Jarama, en

* Madrid.

1 La excavación se desarrolló a lo largo de cinco campañas, de 1979 a 1983, y fue realizada por un equipo técnico dirigido por L. Caballero, J. Arce y M.A. Elvira y compuesto por C. Abad, T. Artigas, H. Larrén, M.A. López, M. Molina, G. Mora, C. Puerta y el autor de este trabajo. El estudio se encuentra actualmente en fase de publicación, con el título *Valdetorres de Jarama I*, ed. L. Caballero (= *Valdetorres I*).

2 D. FERNANDEZ-GALIANO, *Complutum. I. Excavaciones*, Madrid, 1984 (= FERNANDEZ-GALIANO), El material numismático, en p. 401-429.

cuyo valle medio se sitúa el yacimiento. La existencia de una vía que materialice esta relación es patente a través de la presencia de diversos restos, pero es más difícil, con los datos actuales, suponer un alcance suprarregional de la misma en época romana o tardorromana³. La interpretación, de momento, debe basarse preferentemente en la simple relación con *Complutum* y probablemente con una ocupación rural del valle y, en otro grado, en la importancia ya conocida de esta ciudad en los sistemas de comunicaciones NE-SO y probablemente SE. Arquitectónicamente se trata de un edificio de planta octogonal organizado alrededor de un patio, con un corredor, habitaciones de dos tipos y 4 ábsides. Su interpretación desde el punto de vista funcional no está completamente clara, y las posibilidades que se apuntan derivan más del material hallado que de la propia estructura. Destaca especialmente un importante conjunto de esculturas de mármol de temas clásicos diversos, anteriores al edificio, importadas y relacionables con una actividad de coleccionismo o similar⁴; ello, unido al resto del material, hace pensar no en una *villa* dada la estructura y dimensiones pero sí en una dependencia quizá asociada a una *villa* o un núcleo más amplio.

La cronología viene dada por una estratigrafía extraordinariamente simple – un nivel de suelo sin testimonio alguno de ocupación anterior, un nivel de destrucción inmediatamente superior y el estrato superficial – que da como resultado un intervalo de uso bastante corto. A través de algunos indicios puede afirmarse incluso que probablemente el edificio no se llegó a terminar⁵ y que sólo se llegó a utilizar una parte del mismo. El comienzo de ese corto intervalo debe situarse «a partir de» la segunda mitad del *siglo* IV, y probablemente en el último tercio o último cuarto. Es más difícil sin embargo determinar hasta cuándo se prolonga, dado que no hay una estructura de sustitución posterior. Debó abandonarse antes de que esta sustitución pudiera tener lugar pero, por lo menos en la zona, con los datos actuales no puede especificarse una fecha precisa. En todo caso, la primera mitad del *siglo* V supone un margen aceptable en un edificio de las características enunciadas.

El numerario recuperado se compone únicamente de 24 piezas, lo que impide toda valoración estadística aunque facilita en gran manera la precisión descriptiva. De ellas, la gran mayoría - 21 - corresponde a acuñaciones de bronce del *siglo* IV. Otras dos son anteriores - un sestercio de Marco Aurelio fechable entre 175 y 180 (nº1) y un antoniniano de Claudio II (nº2) - y otra - una blanca de Juan II de Castilla (nº24) - queda totalmente fuera de contexto⁶. La mayoría del *siglo* IV, a su vez, se distribuye cronológicamente de la manera siguiente :

- a. 4 piezas anteriores a la reforma de 348 (nº3, 4, 5 y 6); incluso dentro de este periodo se sitúan más bien en una fecha temprana, anterior a 337, lo que no es frecuente en hallazgos de la Península Ibérica⁷. La pieza más llamativa al respecto es un tipo *Soli invicto comiti* de Arles anterior a la reorganización de 318 (nº3);

3 Cf. L. TORRES BALBAS, *Talamanca y la ruta olvidada del Jarama*, en *BRealAcad.*, 146, 1960, p. 235-266. Los pasos del Sistema Central en época romana se atestiguan en la Fuenfría (M. MARINE, *Fuentes y no fuentes de las vías romanas: los ejemplos de la Fuenfría (Madrid) y del Puerto del Pico (Ávila)*, en *Simpósio sobre la red viaria en la Hispania romana*, Zaragoza, 1990, p. 325-339, especialmente p. 329-331) y en todo caso en Ayllón, pero no existe una fuente explícita para Somosierra.

4 M.A. ELVIRA y C. PUERTA, *La escultura romana de Valdetorres de Jarama*, en *Valdetorres I: un avance del estudio* en M.A. ELVIRA y C. PUERTA, *El conjunto escultórico de Valdetorres de Jarama*, en *Goya*, 208, 1989, p. 194-199.

5 Es indicativa por ejemplo la presencia de una gran cantidad de teselas, de las que sólo una reducida minoría está montada.

6 La numeración se refiere al catálogo que se incluye al final del trabajo. La de las piezas de Alcalá de Henares se referirá a la publicación de Fernández-Galiano.

7 Cf. entre otros J.M. GURT, *Clunia III. Hallazgos monetarios. La romanización de la Meseta Norte a través de la circulación monetaria en la ciudad de Clunia*, Madrid, 1985 (= GURT, *Clunia*), p. 171.

- b. 2 correspondientes al patrón inflacionario posterior a la reforma de 348 y anterior a 361 ó 364 (nº7 y 8);
- c. un vacío absoluto entre 364 y 375;
- d. una mayoría de piezas - 15- entre 375 y 395, la mayoría de las cuales, a su vez, se sitúa entre 383 y 395 (nº13-23).

El último grupo es el que constituye, en realidad, el núcleo principal y el que proporciona, desde el punto de vista numismático, la clave del periodo de vida del edificio. Está integrado exclusivamente por *Æ2*, en la versión normal o en la reducida, de los tipos *Reparatio Reipub* y *Gloria romanorum* de Graciano, Magno Máximo, Teodosio y Honorio, tipos que son habituales en la Península Ibérica.

La situación general observable puede sintetizarse pues en un vacío, correspondiente a los años centrales del siglo, situado entre dos máximos relativos entre los cuales se aprecia a su vez una diferencia notable en valor absoluto. Este hecho, unido a la escasez de piezas inflacionarias posteriores a 348, es sin duda la característica más destacable del conjunto teniendo en cuenta la presencia de numerario anterior a ese año y la frecuencia con que, en principio, aparece en la Península el modelo contrario⁸.

La presencia de piezas de los siglos II y III corresponde sin duda a la que se ha denominado circulación residual. Este fenómeno ha sido apuntado ya en diversos estudios referentes a conjuntos hispanos⁹, y Valdetorres viene a constituir un testimonio más del mismo, apoyado por la estratigrafía – ambas piezas proceden de los niveles de destrucción y suelo –.

Otra observación interesante viene motivada por el estado de conservación de las piezas. En efecto, es llamativa la diferencia entre el buen estado relativo de las 4 del siglo IV anteriores a 348 frente al resto y, en concreto, frente a las de finales de siglo que, en cambio, presentan no sólo indicios de desgaste sino de orificios, recortes y otras alteraciones intencionadas que denotan un uso intenso. Si se relaciona este hecho con la procedencia estratigráfica, puede comprobarse asimismo que las primeras proceden en su totalidad de niveles superficiales, mientras que, de las 20 restantes, hay 16 que proceden de los niveles de destrucción o suelo -incluidas las dos de 348-364- frente a sólo 4 de niveles superficiales.

Esta disociación parece sugerir que las piezas anteriores a 348 no circularon apenas y, por otra parte, que en un momento posterior – ya arqueológico – fueron removidas a la superficie. Es sugerente por ello la hipótesis de un atesoramiento que hubiera sido removido, que concordaría además con el hecho de que se trata de piezas infrecuentes – sobre todo los tipos *Soli invicto comiti* y *Virtus Caess* de las piezas nº3 y 4 – y correspondientes a los primeros años de la época constantiniana o en todo caso anteriores al proceso de depreciación. Si bien se trata sólo de una hipótesis, será interesante volver sobre ella tras analizar el material de *Complutum*.

El conjunto de Alcalá de Henares presenta en principio una fisonomía diferente pero, como se ha adelantado, en muchos aspectos puede complementar los datos de Valdetorres. En efecto, el material analizable procede de diversos edificios de carácter doméstico, lo que ofrece en principio una homología funcional de ambos contextos, si bien referidos respectivamente a los medios rural y urbano. Por otra parte, el contexto arqueológico no ofrece la misma precisión que el edificio de Valdetorres.

⁸ Cf. esencialmente J.-P. BOST, M. CAMPO, J.M. GURT, *La circulación monetaria en Hispania durante el periodo romano-imperial : problemática y conclusiones generales*, en *SNB*, I. 1979, vol. II, p. 174-202 (= BOST-CAMPO-GURT).

⁹ Por ejemplo A.M. HUESO, *Un tesoro del siglo IV procedente de zona accitana*, en *Numisma*, 32, 1982, p. 111-165 (p. 143) con bibliografía o, más recientemente, M. CAMPO, *Las monedas de la villa romana de La Olmeda*, Palencia, 1990 (= CAMPO, *La Olmeda*), p. 55.

La publicación de Fernández-Galiano registra 335 monedas inventariadas¹⁰, de las cuales 310 corresponden al siglo IV, 15 son anteriores a ese siglo y 10 no presentan ninguna clase de dato. La cronología general es pues comparable a la del conjunto de Valdetorres. No obstante, de las piezas del siglo IV sólo son fechables, entre las que fecha el autor y las que pueden fecharse con verosimilitud a partir de alguno de los datos consignados, 178, es decir, algo más de la mitad, que constituyen el volumen real de la muestra en principio analizable. De estas 178, una mayoría de 169 corresponde a la familia constantiniana. Considerando la misma periodización que se ha utilizado para Valdetorres, la distribución sigue el esquema siguiente : 317-348 : 118 piezas¹¹; 348-364 : 43; 364-375 : 1; 375-395 : 9.

En términos absolutos, la situación del máximo en época constantiniana supone un esquema inverso al de Valdetorres. Ahora bien, es importante hacer algunas precisiones. En primer lugar, se repite la presencia de un mínimo en la fase 364-375 separando dos máximos relativos. Este elemento resulta especialmente significativo dado que la ausencia de numerario de estas fechas no es habitual en los hallazgos hispanos y proporciona, en términos relativos, una estructura que sí es realmente homóloga o comparable a la de Valdetorres. Por otra parte, dentro de la época constantiniana, se observa una tendencia mayor de las piezas hacia fechas tempranas, en general de los tipos *Gloria Exercitus*¹², y un decrecimiento progresivo de la cuantía de numerario que adquiere proporciones notables a partir de 348 hasta llegar al mínimo a partir de 364. Esta situación es nuevamente contraria al modelo de inflación posterior a 348 y concuerda asimismo con los datos de Valdetorres.

Una nueva analogía viene dada por la circulación residual. En Alcalá aparecen 15 piezas anteriores al siglo IV. La más antigua de ellas es de Tiberio, pero predominan las del siglo II y sobre todo las de Claudio II, lo que supone un nuevo factor de concordancia¹³. Por último, las piezas posteriores a 375, salvo un tipo *Victoria Augg* de Magno Máximo¹⁴, son en su totalidad *Reparatio Reipub* y *Gloria romanorum* equivalentes a los registrados en Valdetorres.

Así pues, dentro de una composición cronológica general esencialmente diferente, puede advertirse la presencia, en ambos conjuntos, de dos unidades cronológicas que ofrecen una cierta homología si se consideran de forma independiente. La diferencia de la estructura general en valor absoluto puede relacionarse en principio con el hecho de que el intervalo cronológico de Alcalá, que contiene al de Valdetorres, no es tan acotado como éste sino más amplio. Con este supuesto, Valdetorres puede configurarse como subconjunto o testimonio de un subperiodo concreto de una realidad más amplia o como indicador de la posibilidad de establecer subperiodos de esa realidad con una base arqueológica.

Además, el máximo del numerario constantiniano en Alcalá debe matizarse dada la concentración de los hallazgos que, en este caso, sí parecen indicar de manera bastante probable la presencia de un fenómeno de atesoramiento, como ya apunta Fernández-Galiano¹⁵. En efecto, la gran mayoría de las piezas – 283 de las 335 – procede de la llamada Casa de Leda. Fuera de ella, las piezas procedentes de cada unidad topográfica o

¹⁰ Debe advertirse que este estudio se basa en la publicación, en espera de poder efectuar una revisión directa del material, que en bastantes casos sería muy necesaria. No obstante, los datos obtenidos son suficientemente significativos.

¹¹ Es de destacar la presencia, también aquí, de un tipo *Soli invicto comiti* de 313-314, en este caso de Lyon (FERNÁNDEZ-GALIANO nº 315).

¹² Pueden contabilizarse, con los riesgos de error consiguientes al tipo de información, 85 piezas de este tipo anteriores a 337. La publicación no incluye ningún estudio, por lo que este recuento y los que siguen se basan en el elenco presentado.

¹³ FERNÁNDEZ-GALIANO nº 1, 3, 4, 5, 6, 11, 12, 19, 20, 26, 286, 288, 303, 305 y 311.

¹⁴ FERNÁNDEZ-GALIANO nº 317.

¹⁵ FERNÁNDEZ-GALIANO, p. 250.

arquitectónica son muy escasas, incluso más escasas que en el edificio de Valdetorres. A su vez, la mayoría de las 283 de la Casa de Leda se concentra en dos catas y el testigo entre ellas, circunstancia que ha dado pie a la hipótesis. Desafortunadamente no se da una precisión suficiente para localizar, dentro de esas catas, qué piezas corresponden a la concentración por lo que, si quiere eliminarse ésta del recuento, deberán eliminarse todas las piezas procedentes de ellas con los consiguientes riesgos. Una vez descontadas, no obstante, el recuento de las restantes proporciona 2 del siglo III, 16 del IV anteriores a 348, 10 entre 348 y 364 y 6 posteriores a 375. El predominio constantiniano se mantiene pero deben observarse tres hechos importantes. En primer lugar, un decrecimiento espectacular del valor absoluto. En segundo, que salvo un margen de error quizá importante dadas las condiciones del recuento, la situación general se equilibra considerablemente. En tercero, y en consecuencia, el predominio constantiniano en las proporciones observadas parece poder relacionarse con la presencia del tesoro y no con factores estrictos de circulación.

Por otra parte, la comprobación efectiva en Alcalá del atesoramiento de piezas constantinianas en cuya tipología y distribución cronológica se integran sin problemas las piezas de Valdetorres resulta significativa. No obstante, en las catas mencionadas aparecen bastantes piezas del periodo 348-364 y, por tanto, no debe descartarse la posibilidad de que también hubieran sido atesoradas – las dos de Valdetorres, con toda seguridad, no lo fueron –. Con los datos actuales no puede precisarse más al respecto, pero es importante comprobar el fenómeno, que ofrece una pauta para la interpretación de la hipótesis planteada en Valdetorres y un factor más de correlación.

Estos elementos parecen corroborar la validez de la configuración del numerario de Valdetorres como subconjunto de una unidad más amplia representada en esencia por el de Alcalá. Los datos obtenidos permiten inferir unas líneas esenciales de circulación en la zona que pueden sintetizarse como sigue :

- una aportación de numerario de la primera época constantiniana, no común en la Península;
- una disminución del posterior, manifiesta de forma paulatina ya desde antes de 348, con un mínimo desde 364 que se mantiene hasta 375 aproximadamente;
- un probable atesoramiento de la anterior que puede relacionarse con esta disminución;
- una reactivación después de 375 o de 380 mediante la circulación de $\text{Æ}2$ y de piezas residuales de los siglos II y III que, según los datos arqueológicos, parecen integrarse mejor en este periodo que en los precedentes.

La dinámica del numerario constantiniano presenta una cierta originalidad no sólo por la rareza de las piezas de la primera época sino porque supone una tendencia decreciente contraria, en principio, al proceso inflacionista de este periodo. Pero no hay que olvidar que, por lo menos en Valdetorres, se trata de restos ubicados en una realidad arqueológica posterior, y esta precisión constituye una de las aportaciones fundamentales del yacimiento. Es decir, la información que ofrece sobre la época constantiniana es, por decirlo así, de segunda mano, consiguiente a un proceso de transformación complejo, frente a la relativa a la última fase que es directa. Por tanto, no debe concederse el mismo valor a los testimonios como fuente de uno y otro periodo. Las circunstancias y el momento de la aportación, del probable atesoramiento y sus motivos, e incluso los factores de la conservación o desaparición posterior de los diversos tipos, sugieren un abanico de hipótesis – algunas de ellas se han planteado ya repetidas veces a partir de otros conjuntos – en las que no cabe insistir. Lo que puede afirmarse con cierta seguridad es que, a finales de siglo, no se denota la presencia de numerario inflacionario y, ya sea el atesoramiento o las secuelas del mismo, constituyen aún una realidad vigente.

La reactivación de finales de siglo, en cambio, siempre a través de los datos de Valdetorres, parece tener lugar en un contexto de circulación usual e intensa que se prolonga, sin duda, después de interrumpirse la aportación de numerario nuevo y, por lo

menos, hasta bien entrado el siglo V. Este fenómeno es también normal y se ha comprobado en diversos yacimientos¹⁶.

La distribución de cecas, por último, sigue en ambos conjuntos y periodos la dinámica habitual en *Hispania*, por lo que no aporta ninguna novedad y no cabe insistir en ello.

Queda por ver cómo se integra esta situación en la dinámica peninsular, que parece perfilarse actualmente – haciendo por supuesto abstracción de los pormenores – en un esquema diversificado respecto al planteamiento de un modelo general de predominio constantiniano y regresión posterior, por lo menos en la Meseta¹⁷. Para ello es fundamental tener en cuenta que en Valdetorres, y probablemente en Alcalá, la situación documentada de manera más precisa corresponde a la última fase del siglo y que los demás fenómenos deben ir referidos a éste. La presencia de numerario de esta fase es habitual en *Hispania*, y su importancia fue advertida ya por Callu a partir de algunos hallazgos¹⁸. Con los datos actuales será interesante reseñar algunos conjuntos en que este numerario es mayoritario o por lo menos significativo. Se trata de hallazgos que, en general, se han ido considerando anómalos respecto al modelo aceptado como general pero que actualmente, dentro del esquema de mayor diversificación, deben valorarse de forma diferente.

Clunia, en primer lugar, presenta un esquema general concordante con el modelo de fuerte inflación en los años centrales del siglo y disminución del numerario en los finales, pero destaca J.M. Gurt el elevado porcentaje de piezas posteriores a 364 y sobre todo 378 en relación con otros yacimientos y cree importante establecer la diferenciación de los hallazgos¹⁹. El tesorillo de Torrecaños – hallazgo próximo a Mérida – presenta una fuerte mayoría de piezas fechadas a partir de Graciano²⁰. En Cástulo²¹ se diferencian dos conjuntos del siglo IV, estudiados de forma independiente : si el de la necrópolis de la puerta Norte sigue las pautas del predominio de los tipos inflacionarios²², el de la llamada «villa urbana» consta de 47 piezas correspondientes en su totalidad al tipo *Reparatio Reipub* y fechadas entre 375 y 392²³. En la villa de Cártama (Málaga), publicada de momento sólo parcialmente, predomina también el tipo *Reparatio Reipub*²⁴. El tesorillo de la zona de Acci, estudiado y publicado con precisión, abarca un intervalo cronológico total de 268 a 408, presentando porcentajes máximos en el último cuarto del siglo IV, concretamente de 378 a 408²⁵.

16 CAMPO, *La Olmeda*, p. 46-47.

17 BOST-CAMPO-GURT, p. 180. Recuérdese que la síntesis se basa esencialmente en el yacimiento de La Olmeda y otros extramuros, relacionados sobre todo con la referencia de *Conimbriga*.

18 J.-P. CALLU, *Reparatio Reipub : un problème de circulation monétaire*, en *Nummus*, I, 1978, p. 99-119, y las observaciones posteriores de J.-P. CALLU, *Le Bas-Empire (284-491)*, en *RSN*, 1978-1984, p. 281-283. Se incluyen nuevas observaciones en J.-P. BOST, F. CHAVES, G. DEPEYROT, J. HIERNARD y J.-C. RICHARD, *Belo IV. Les monnaies*, Madrid, 1987, p. 79-96, que revaloriza este periodo también en *Conimbriga*. Ambos conjuntos, no obstante, responden al esquema contrario al de Valdetorres y Alcalá.

19 GURT, *Clunia*, p. 182-184.

20 A. VELAZQUEZ, *El tesorillo de «Torrecaños». Guareña (Badajoz)*, en *Augusta Emerita* I, Madrid, 1983, p. 81-190. Salvo errores posibles de apreciación, de un total de 1450 piezas se registran 10 residuales y, de las restantes, correspondientes al siglo IV, un 93,3% es posterior a 364.

21 J.M. BLAZQUEZ y J. ARCE, *Monedas del Bajo Imperio en Cástulo*, en *Numisma*, 28, 1978, p. 359-398.

22 J. ARCE, *Estudio de las monedas de la Puerta Norte*, en *Cástulo* II, Madrid, 1979, p. 91-108.

23 ID., *Un conjunto de monedas tardorromanas hallado en Cástulo*, en *Cástulo*, II, Madrid, 1979, p. 283-304. Es de lamentar, sin embargo, que no se efectúe una interpretación arqueológica de ambos conjuntos, que podría haber sido muy útil.

24 E. SERRANO y A. LUQUE, *Monedas del tipo Reparatio Reipublicae de una villa de Cártama (Málaga)*, en *Numisma*, 28, 1978, p. 323-336.

25 HUESO, *op. cit.*, en *Numisma*, 32, 1982, p. 111-165.

En la Bética occidental, uno de los tesorillos de La Lantejuela (Sevilla) presenta asimismo un predominio de piezas de Graciano, Magno Máximo, Teodosio, Arcadio y Honorio²⁶. En *Italica* ofrece un gran interés el estudio diferenciado de los conjuntos correspondientes a los distintos edificios²⁷: si la mayoría de ellos presenta una distribución cuyo esquema general sigue el modelo de predominio inflacionario²⁸, el de la Casa del mosaico de Venus y, sobre todo, el del Teatro, presentan, en el siglo IV, un mayor porcentaje de piezas del periodo 361-408.

Entre las monedas halladas en *Arcobriga*, que corresponden mayoritariamente a emisiones hispánicas anteriores al siglo I d.C., se encuentra un pequeño porcentaje de piezas del siglo IV en el que predominan los tipos *Reparatio Reipub* y *Gloria romanorum*²⁹. Su interés respecto a Alcalá y Valdetorres radica en su situación topográfica y su relación con el eje viario NE-SO. Finalmente, en la ciudad de *Barcino*, los estudios más recientes, basados en yacimientos del núcleo urbano con estratigrafía precisa y sin atesoramientos, denotan una distribución cronológica que presenta una notable analogía con la observada en Valdetorres en estratos de los siglos V y VI³⁰, dato que resulta bastante significativo.

Todos estos elementos son suficientes para proporcionar efectivamente un contexto de circulación monetaria en el que puede integrarse el conjunto de Valdetorres y Alcalá. En todos o casi todos los conjuntos enumerados, por otra parte, las cantidades de piezas registradas, en valor absoluto, son bastante menores que las de los conjuntos de época constantiniana. Ahora bien, teniendo en cuenta sobre todo los contextos arqueológicos – localizaciones precisas y en general con estratigrafía – es razonable pensar que esta situación no se debe tanto a una aportación menor de numerario a finales de siglo como a una diferencia importante de contexto, es decir, a una circulación más efectiva en esta última etapa que se contrapone a un alto grado de atesoramiento en la anterior, probablemente debido a una mayor inestabilidad de la situación. Precisamente una de las aportaciones más significativas de la cronología de Valdetorres respecto a los conjuntos más extensos es comprobar que no se trata de una aportación marginal dentro del siglo IV sino del circulante real a partir de un momento concreto del mismo. Respecto a la perduración de este esquema, la presencia en *Barcino* del mismo modelo aún en el siglo VI viene a ser significativa de la estabilidad con que parece desenvolverse³¹.

26 F. PEREZ SINDREU, *Tesorillo de monedas del Bajo Imperio encontrado en La Lantejuela (Sevilla)*, en *Numisma*, 32, 1982, p. 91-110, publicado con deficiencias de precisión importantes. Llama la atención la proximidad de otro tesorillo con predominio constantiniano: cf. R. ARROYO, *Análisis e interpretación de las monedas romanas bajoimperiales de La Lantejuela (Sevilla)*, en *Numisma*, 32, 1982, p. 171-192, pero tampoco se dispone de una interpretación arqueológica de ambos conjuntos.

27 F. CHAVES, *Monedas halladas en las excavaciones de Itálica*, en *Italica (Santiponce, Sevilla). Actas de las primeras jornadas sobre excavaciones arqueológicas en Itálica*. Sevilla, 1980, Madrid, 1982, p. 261-274.

28 F. CHAVES, *Avance sobre la circulación monetaria en Itálica*, en *SNB*, I, 1979, vol. II, p. 77-86.

29 J.M. VIDAL, *Aportación a la circulación monetaria en Arcóbriga, Aguilar de Anguita y Luzaga*, en *ActaNum*, II, 1981, p. 67-76. De los tres yacimientos, *Arcobriga* es el único que presenta una continuidad hasta el siglo IV.

30 T. MAROT, *Models de circulació monetaria a Barcino durant la baixa romanitat*, en *La romanització del Pirineu, 8e CIAP*, Puigcerdá, 1990, p. 221-226, que perfila los resultados generales obtenidos por M. CAMPO y J.O. GRANADOS, *Aproximación a la circulación monetaria en Colonia Barcino*, en *SNB*, I, 1979, vol. I, p. 57-69.

31 Esta fecha es sugerente como punto de referencia en relación con la transición a la circulación de época visigótica, cuyos primeros testimonios se localizan en este siglo. Sin embargo, en el estado actual de la cuestión no se dispone de elementos suficientes – sobre todo de comparación en un mismo nivel – para apuntar alguna posibilidad al respecto. Cf. X. BARRAL I ALTET, *La circulation des monnaies suèves et visigothiques*, München, 1976, p. 143-151 y, especialmente, p. 144 sobre la presencia de bronce tardorromanos en contextos visigóticos que sigue atestiguando la continuidad del uso. Tampoco las recientes hipótesis de M. CRUSAFONT, *The Copper Coinage of the Visigoths of Spain*, en *Problems of Medieval Coinage in the Iberian Area*, 3, Santarem, 1988, p. 35-70, ofrecen aún elementos significativos desde el punto de vista de la circulación monetaria.

La localización de los hallazgos mencionados parece indicar que este modelo se extiende preferentemente en un área peninsular bastante amplia que incluye la mitad Sur, el Este y el centro o, dicho de otro modo, tiende a evitar el NO. Los datos actuales son aún escasos para deducir conclusiones en este sentido, pero es interesante advertir que precisamente el NO es la zona que parece concentrar con mayor claridad el modelo contrario. De confirmarse, esta desvinculación podría relacionarse con la distribución de los circuitos económicos en el siglo IV y, en el V, incluso con estructuras políticas quizá herederas de ella. No obstante, la presencia del mismo modelo en determinados conjuntos del resto de la Península y la coexistencia topográfica de los dos en diversos casos – *Castulo*, *Italica* y quizá *Clunia* por ejemplo – apunta a un mayor significado del factor cronológico, por lo menos en esta zona. De modo general, debe destacarse la diferencia entre la distribución desigual que caracteriza la época constantiniana y la homogeneidad de los testimonios posteriores, factor que puede ser asimismo indicativo de estabilidad.

Resulta interesante asimismo observar, a partir de los contextos de los hallazgos, algunos rasgos de heterogeneidad que pueden traducirse en factores de generalización. En primer lugar, a pesar de lo observado acerca de la fluidez de la circulación, algunos de ellos corresponden a atesoramientos, por lo que no cabe excluir totalmente el fenómeno ni asignar las piezas a contextos de pérdida de forma absoluta. Ahora bien, el atesoramiento no reviste la importancia de las fases anteriores, ni en el número de concentraciones ni en el volumen de las mismas. El segundo rasgo se refiere a la heterogeneidad funcional de los yacimientos. En efecto, algunos de los hallazgos corresponden a medios rurales y otros a medios urbanos de carácter doméstico comprobado, pudiendo ambos constituir paralelos funcionales de los casos de Valdetorres y de Alcalá y denotar que, como sugerían éstos, no cabe establecer diferencias sustanciales entre ambos en este periodo. Aunque, no obstante, el edificio de Valdetorres no reviste una dimensión suficiente para interpretarse de forma independiente desde cualquier punto de vista económico. Los ejemplos de *Barcino* y de *Italica* añaden, además, contextos urbanos centrales e incluso públicos³² con análoga distribución y ausencia de atesoramientos. Suficientemente distantes entre sí, suponen una nota de especial importancia en este aspecto y ofrecen una pauta importante para generalizar la situación.

En consecuencia, si es posible la generalización y como hipótesis de trabajo, los datos observados parecen sugerir un esquema de circulación monetaria bastante extendido y estable que se implanta a finales del siglo IV y que debe proponerse como sustitución del modelo anterior. Probablemente, la superioridad cuantitativa de los conjuntos correspondientes a éste puede haber ofuscado este fenómeno y motivado la interpretación de sus testimonios como anomalías. Ahora bien, los datos arqueológicos permiten relacionar la diferencia numérica con el atesoramiento, cuyos efectos se han advertido en este trabajo, si bien en un caso concreto, y por tanto con realidades históricas diferentes. Este planteamiento supone proponer, a escala peninsular, que la etapa constantiniana evoluciona según una dinámica de notable inestabilidad que da lugar a importantes atesoramientos y que, en un determinado momento, se sustituye por otra de circulación fluida y estable.

Por último, plantear el contexto histórico concreto en una escala peninsular excede ya con mucho los límites propuestos de este trabajo. Ahora bien, volviendo a la zona considerada, parece que la reactivación de la circulación monetaria se engloba, en efecto, en un momento de cierta regularidad económica que sucede a etapas por lo menos inciertas. Los testimonios de esta situación son, por otra parte, escasos. Las fuentes literarias son muy parcas en datos sobre *Complutum*. Recientemente se ha deducido un cierto crecimiento en época flavia manifestado en el aspecto institucional, pero no parece

³² Probablemente públicos en *Barcino* – zona de las termas o contigua – y con seguridad en el teatro de *Italica*: la misma ciudad ofrece un contexto doméstico del mismo modelo – casa del mosaico de Venus – y la coexistencia con el contrario.

cierto crecimiento en época flavia manifestado en el aspecto institucional, pero no parece traducirse en una trascendencia económica o urbana significativa³³. En época tardorromana, sin embargo, la mención de algunos acontecimientos y la posibilidad de que sea sede episcopal implican una mayor relevancia en el sistema urbano³⁴. Arqueológicamente, los edificios excavados de Alcalá conservan mosaicos de cierta calidad, fechados precisamente a partir de la segunda mitad del siglo IV³⁵, indicativos de un cierto enriquecimiento y de la inclusión de la ciudad en determinados circuitos económicos bien conocidos. El propio edificio de Valdetorres, no en sí mismo sino a través de una colección de esculturas clásicas de mármol importadas y probablemente también de un mosaico, debe añadirse a estos datos. El auge de la circulación monetaria aparece entonces como una manifestación más.

Cuánto tiempo se prolonga esta situación es la cuestión en que desembocan reiteradamente todos los elementos analizados y que, una vez más, sólo puede quedar esbozada. Los datos de Valdetorres constituyen un testimonio bastante preciso por lo efímero de su existencia y, al haberse excavado en su totalidad, la información obtenida puede considerarse agotada. Alcalá, sin embargo, proporciona otro contexto, urbano y cronológicamente más amplio y complejo, y está excavado aún muy parcialmente. Probablemente las nuevas excavaciones puedan aportar en un futuro nuevas precisiones no sólo sobre este momento sino en un intervalo más amplio.

VALDETORRES DE JARAMA : CATALOGO

1. Marco Aurelio, Æ sestercio, Roma, 175-180
Anv. : (M AV)REL ANTONI-NVS (AVG...) Cabeza laur. d.
Rev. : Ilegible. (S)C en campo. (Felicitas?) Fig. femenina en pie.
Estratigrafía : nivel de destrucción/suelo; ø 30 mm; 25,26 g; 5; BMC 1695?
2. Claudio II, antoniniano, Roma, 268-270
Anv. : IMP C CL(AVDIVS) AVG Busto rad. d.
Rev. : AN(NON)-A AVG Annona en pie.
Estratigrafía : nivel de destrucción; ø 21,45 mm; 2,92 g; 12; RIC 19, HuntC IV, 8.
3. Constantino, follis, Arles (T), 317-318
Anv. : IMP CONSTANTINVS PF AVG Busto laur., paludamentum, d.
Rev. : SOLI INVI-(CTO C)OMITI/C-S/TARA Sol en pie, globo, d.
Estratigrafía : nivel superficial; ø 20,25 mm; 2,80 g; 12; RIC 144.
4. Constancio II César, follis, Arles (P), 328
Anv. : FL IVL CONSTANTIVS NOB C Busto laur., paludamentum, i.
Rev. : VIRTVS CAESS/S-F/PCONST Torre 4 alm. puerta abierta. Estrella sobre torre.
Estratigrafía : nivel superficial; ø 20 mm; 2,01 g; 12; RIC 323.
5. Constantino, follis, Nicomedia (A), 336-337
Anv. : CONSTANTINVS MAX AVG Busto diad. de rosetas, paludamentum, d.
Rev. : GLORIA EXERC-ITVS / SMNA 2 soldados, 1 estandarte.
Estratigrafía : nivel superficial; ø 17 mm; 1,29 g; 12; RIC 199.
6. Constancio II, follis, Lugdunum, 337-340
Anv. : (... CONSTAN-TI)VS AVG Busto diad. de rosetas, coraza, d.
Rev. : (GLORIA)A EXERC-ITVS 2 soldados, 1 estandarte con marca S.
Estratigrafía : nivel superficial; ø 14 mm; 1,17 g; 7; RIC 21.
7. Constancio II o Juliano, Æ4, Arles?, 355-363
Anv. : ?
Rev. : (SPES REI-PVBLICE) / Ilegible Emp. en pie, globo, d.
Estratigrafía : nivel de destrucción; ø 15,45 mm; 1,45 g; 12; RIC 277?
8. Constancio II?, Æ3/4, 350-361?
Anv. : ...ON... Busto laur. d.
Rev. : (FEL TEMP REPARATIO)? Caballero caído?
Estratigrafía : nivel de suelo; ø 16,10 mm; 1,87 g; ?; -.

33 J.M. ABASCAL y U. ESPINOSA, *La ciudad hispano-romana : privilegio y poder*, Logroño, 1989, p. 72 y 78.

34 Cf. Paulino de Nola 31, 607 o Prudencio, *Peristeph*, 4, 41-43.

35 FERNANDEZ-GALIANO, p. 158 (Casa de Baco) y 249 (Casa de Leda).

9. Graciano, Æ2 (red), Arles (T), 375-378
Anv. : (DN GRATIA)-NVS (PF) AV(G) Busto diad. de perlas, paludamentum, d.
Rev. : REPARATIO (REIP)VB/TCON
Estratigrafía : nivel superficial/destrucción; ø 23,50 mm; 4,48 g; 5; RIC 20a.
10. Graciano, Æ2 (red), Aquileia (P), 378-383
Anv. : DN GRATIA-NV(S PF AVG) Busto diad. de perlas, paludamentum, d.
Rev. : REPARATIO (RE)IPVB/SMAQP
Estratigrafía : nivel de destrucción/suelo; ø 22,40 mm; 4,03 g; 7; RIC 30a.
11. Graciano, Æ2, Antioquía, 378-383
Anv. : DN GRATIA-NVS PF AVG Busto diad. de rosetas, paludamentum, d.
Rev. : REPARATIO REIPVB/B/ANT
Estratigrafía : nivel de suelo; ø 25,25 mm; 5,59 g; 12; RIC 42b.
12. Graciano, Æ2 (red), ?, 378-383
Anv. : DN GRATIA-(NVS P)F AVG Busto diad. de rosetas, coraza, paludamentum, d.
Rev. : (REPARATIO REI)PVB/ ?
Estratigrafía : nivel de destrucción; ø 21,45 mm; 4,00 g; 1.
13. Magno Máximo, Æ2 (red), Arles (S), 383-388
Anv. : DN M(AG) MAX(I-MVS PF AVG) Busto diad. de perlas, paludamentum, d.
Rev. : REPARATIO REIPVB/SCON
Estratigrafía : nivel superficial; ø 23,85 mm; 4,52 g; 5; RIC 26a.
14. Magno Máximo, Æ2 (red), Arles (S), 383-388
Anv. : (DN) MAG MAXI-(MVS PF) AVG Busto diad. de perlas, paludamentum, d.
Rev. : REP(ARATIO) REI(PVB)/SCON
Estratigrafía : nivel de destrucción/suelo; ø 22,65 mm; 4,15 g; 7; RIC 26a.
15. ?, Æ2, ?, 378-388
Anv. : Ilegible Busto, d.
Rev. : (REPARATIO REIPVB)/?
Estratigrafía : nivel de destrucción; ø 24,05 mm; 5,13 g; 12; -
16. Teodosio, Æ2, Aquileia (S), 378-388
Anv. : DN THEODO-SIVS PF AVG Busto diad. de perlas, paludamentum, d.
Rev. : REPARATIO REIPVB/SMAQS
Estratigrafía : nivel superficial; ø 23,75 mm; 4,41 g; 7; RIC 30d.
17. Teodosio, Æ2 (red), ?, 378-383
Anv. : DN THEODO-SIVS PF AVG Busto diad. de perlas, paludamentum, d.
Rev. : (REPARAT)IO (REIPVB)/?
Estratigrafía : nivel de destrucción/suelo; ø 23,00 mm; 3,37 g; 7; -
18. Teodosio, Æ2, ceca oriental indeterminada, 378-388
Anv. : DN THEODO-SIVS PF AVG Busto, casco, diad. de perlas, paludamentum, d.
Rev. : (GLORI)A RO-MANORVM Emp. en pie, i. sobre nave.
Estratigrafía : nivel de suelo; ø 21,40 mm; 4,11 g; 5; -
19. Teodosio, Æ2 (red), Constantinopla (A), 392-395
Anv. : DN THEODO-SIVS PF AVG Busto diad. de perlas, paludamentum, d.
Rev. : GLORIA ROMANORVM/CONSA Emp. en pie, con estandarte, globo.
Estratigrafía : nivel superficial; ø 21,85 mm; 3,29 g; 7; RIC 88a.
20. Teodosio, Æ2, Heraclea, 392-395
Anv. : DN THEODO-SIVS PF AVG Busto diad. de perlas, paludamentum, d.
Rev. : GLORIA ROMAN(ORVM)/-* Emp. en pie con estandarte, globo.
Estratigrafía : nivel de destrucción; ø 22,40 mm; 5,63 g; 11; RIC 27a.
21. Teodosio, Æ2, Antioquía, 392-395
Anv. : DN (THEODO)-SIVS PF AVG Busto diad. de perlas, paludamentum, d.
Rev. : GLORIA ROMAN(ORVM)/ANT(.) Emp. en pie con estandarte, globo.
Estratigrafía : nivel de destrucción; ø 19,55 mm; 4,96 g; 12; RIC 68a.
22. Honorio, Æ2, Nicomedia (Γ), 392-395
Anv. : DN HONORIV(S PF AVG) Busto diad. de perlas, paludamentum, d.
Rev. : (GLORIA) RO(MA)NORVM/SMNT Emp. en pie con estandarte, globo.
Estratigrafía : nivel de destrucción; ø 20,15 mm; 4,37 g; 12; RIC 46c.
23. Honorio, Æ2, Antioquía (A), 392-395
Anv. : D(N HO)NORIVS PF AVG Busto diad. de perlas, paludamentum, d.
Rev. : GLORIA ROMANORVM/ANTA Emp. en pie con estandarte, globo.
Estratigrafía : nivel de destrucción; ø 22,30 mm; 3,93 g; 11; RIC 68e.
24. Juan II de Castilla, blanca, Coruña, 1406-1454
Anv. : (+Iohanes Dei Gracia Rex Ca) Emblema heráldico de Castilla en marco hexalobulado.
Rev. : (+IOHAN)NES DEI (GRA)CIA (R)EX Emblema heráldico de León en marco hexalobulado
venera.
Estratigrafía : nivel de destrucción; ø 22,75 mm; 1,60 g; 2; Heiss 6.

The Late Roman Bronze Coinage from Antioch of Theodosius II to Anastasius (A.D. 425-498)

Eckart SCHLÖSSER*

It was generally accepted that Leo I (A.D. 457-474) closed the mint of Antioch on the Orontes¹ to be re-opened by Anastasius (A.D. 512/17)². In a recent publication³, an improved version as to the chronology of late Roman bronze coins of Antioch was offered. Despite this new analysis, there are still some cases for discussion.

A thorough study of the small and unobtrusive Roman bronze coins of the second half of the 5th century A.D. is hampered by several factors :

- a generally poor and careless fabrication makes these coins rather unattractive;
- due to the small size and thin flans, these coins are readily and in most cases completely decomposed in soil;
- when such coins survive and are unearthed, they are usually in a poor state of conservation;
- because of their low purchasing power, such coins are rarely accumulated in hoards.

Though most likely produced in large quantities, comparatively few of these minute coins have survived. From this results the strange situation that they are often much rarer than gold coins of the respective emperor from a given mint.

Despite the beforementioned shortcomings, an attempt will be made to revise the late Roman bronze coinage from Antioch. It is based on already published informations and coins from the author's collection⁴. For transparency, the corresponding numbers from three detailed reference publications⁵ will be cited. In this listing, the numerical system is used to facilitate further additions, when they can be safely attributed to the mint of Antioch.

1. Theodosius II (425-450)

Only two types have been issued at Antioch over 25 years. The first is rather scarce, the second plentiful.

- 1.1 Obv. : DN THEODOSIVS PF AVG Bust r., draped and pearl diademed.
Rev. : Victory facing, wreath in each hand; ANT
LRBC 2809 - off. A, MIRB 82, W -, ES +.
- 1.2 Obv. : DN THEODOSIVS PF AVG Bust r., draped and pearl diademed.
Rev. : Cross within wreath; ANT
LRBC 2810 - off. A, MIRB 84, W 1988 - off. A, B and . ES +

There is no dispute about this period of coinage.

* Giessen.

1 LRBC = R.A.G. CARSON and J.P.C. KENT, *Late Roman Bronze Coinage*. II. A.D. 346-398, London, 1978, p. 103; MIRB = W. HAHN, *Moneta Imperii Byzantini*. I. Von Anastasius bis Justinianus I (441-565) (Österreichische Akademie der Wissenschaften, Phil.-Hist. Klasse, Denkschriften, 104), Wien, 1973, p. 36; D.R. SEAR, *Roman Coins and Their Values*, London, 1974, p. 48.

2 MIRB = W. HAHN, *Moneta Imperii Romani Byzantini*, Wien, 1989, p. 14.

3 *Ibidem*, p. 21, 67, 69 and 74.

4 ES author's collection.

5 W = D.B. WAAGE, *Greek, Roman, Byzantine and Crusader's Coins. Antioch on-the-Orontes*, IV/2, Princeton, 1952.

2. *Marcianus* (450-457)

This period needs some corrections.

- 2.1 Obv. : DN MARCIANVS PF AVG Bust r., draped and pearl diademed.
Rev. : Cross within wreath; ANT
LRBC -, MIRB -, W -, ES + (Fig. 1, enlargement 2x).



Two specimens of this apparently unpublished coin were acquired by the author from a coin dealer in Beirut. The obverse inscriptions are DN MAR (CIANVS P) F AVG and DN MARCIANVS PF AVG, respectively. Officina letters are not recognizable. Because of its rarity, this type has probably been issued only in a relatively small quantity.

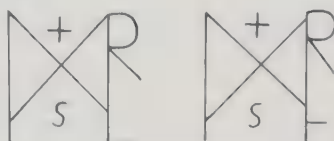
In continuation to the last bronze coin of Theodosius II (1.2), it should be placed as the first issue at the beginning of Marcianus' reign. J.P.C. Kent (personal communication) has seen such coins, but considers them to be mules. The fact that both obverses and reverses of the two coins are from different dies militates against this interpretation and is rather an indication that they are part of a non-substantial, but regular issue.

- 2.2 Obv. : DN MARCIANVS PF AVG Bust r., draped and pearl diademed.
Rev. : Monogram within wreath; ANT
LRBC 2812 (mono 7) - off. A, MIRB 34/7 - off. A and B, W 2023 - off. A (four specimens with legible mint mark), ES -

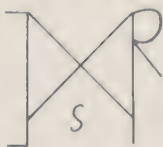
Though this monogram has been used simultaneously by the mints CON, NIC and CYZ, the attribution of coins with this monogram to Antioch is indisputable.

- 2.3 Obv. : DN MARCIANVS PF AVG Bust r., draped and pearl diademed.
Rev. : Monogram within wreath; ANT
LRBC -, MIRB -, W -, ES + - off. A (Fig. 2, enlargement 2x).

From the two specimens one carries the partially legible mint mark (AN) TA.



- 2.4 Obv. : DN MARCIANVS PF AVG Bust r., draped and pearl diademed.
 Rev. : Monogram within wreath; ANT
 LRBC 2811 - off. A, *MIRB* -, W -, Es -



More than 17 monograms of Marcianus are known⁶, most with only slight deviations. This raises the question whether they were intended to be different or if it is just the result of bad die-cutting? Considering the careless fabrication of these coins, the latter alternative appears to be more plausible. In consequence, monogram 2.3 could be just an unintentional variation of 2.2.

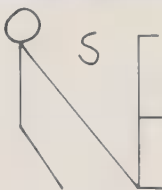
3. *Leo I* (457-474)

For the long reign only a few types of bronze coins can be attributed safely to the mint of Antioch.

- 3.1 Obv. : DN LEO PF AVG Bust r., draped and pearl diademed.
 Rev. : Lion standing l. within wreath, looking r.; ANT
 LRBC 2813, *MIRB* 42, W 2033, ES +

This type, though scarce, is found in most collections.

- 3.2 Obv. : (DN LEO PF AVG) Bust r., draped and pearl diademed.
 Rev. : Monogram within wreath; ANT
 LRBC -, *MIRB* -, W -, ES +



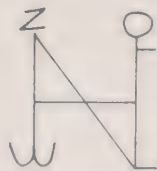
There are two coins in the author's collection with a particular monogram. It is similar to monogram 1 published⁷, but the first vertical bar starts bending inwards at the middle.

Besides, two further types may have been issued at Antioch. Both were unearthed during the excavations in larger numbers than the type 3.1. The first carries the monogram 1 published⁸ (W 2029, 7x). The second bears on the reverse the Emperor, in a long robe, with nimbus, standing facing, holding globus crucifer in the right and scepter transversely in the left hand (W 2032, 8x). Site evidence points to Antioch as mint, but in the absence of legible mint marks no safe attribution can be made.

4. *Zeno* (476-491)

The «missing link» in the bronze coinage of Antioch between Leo I and Anastasius I was published⁹ in 1968. It carries the monogram 4.1 with a pronounced omega at the basis of the first vertical bar.

- 4.1 Obv. : Bust r., draped and pearl diademed, (obverse inscription ?).
 Rev. : Monogram within wreath; ANT
 LRBC -, *MIRB* -, W -, ES +



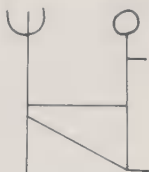
⁶ H.L. ADELSON, and G.L. KUSTAS, *A Bronze Hoard of the Period of Zeno I* (NMM, 48). New York, 1962, p. 89.

⁷ *Ibidem*, p. 89.

⁸ *Ibidem*, p. 89.

⁹ Cl. BRENOT, *Un bronze de Zénon de l'atelier d'Antioche*, in *BSFN*, 23, 1968, p. 323-324.

- 4.2 Obv. : Bust r., draped and pearl diademed, (obverse inscription ?).
 Rev. : Monogram within wreath; ANT
 LRBC -, MIRB 32, W -, ES -



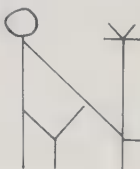
An other apparently quite rare coin with a different monogram (4.2) and a clearly legible mint mark has been published. It has likewise an omega, but on the upper end of the first vertical bar as opposed to 4.1 with an omega at the base.

In the author's collection there is a coin with the following reverse : Emperor standing facing, helmeted and in military dress, with a long cross in the right and a globe in the left hand. This coin with a flan larger and thicker than coins of Leo I and no legible obverse inscription carries an omega in the left field of the reverse. Based on the fact that the omega is so prominently and exclusively displayed on Antiochene coins with monograms of Zeno, this coin (W 2036, 2x; omega ?) is a candidate for a Zeno issue from this mint. Further studies are, however, needed before a reasonably safe attribution can be made.

5. *Anastasius I (491-512/17)*

Before the monetary reform in A.D. 498 only one type of bronze coin was issued.

- 5.1 Obv. : (inscription ?) Bust r., draped and pearl diademed.
 Rev. : Monogram within wreath; ANT
 LRBC -, MIRB I 64, W 2063, ES +



A large number of such coins have been unearthed during the excavations at the site of Antioch (W 2063, 72x), but apparently only one coin in the Museum in Berlin is known to carry a legible mint mark. The monogram appears to be specific for Antioch, allowing a safe attribution even in the absence of a legible mint mark.

This coin has been placed in the period A.D. 512/517¹⁰, the time of the second reform of the copper coinage by Anastasius I. There are two objections. First, such placement implies an interruption in the coinage, this time between Zeno and Anastasius I. Secondly, why does a simple matter distort into a complicated agenda? The monogram coin of Anastasius I is just a continuation in the *nummi* coinage and as such a pre-reform coin issued between A.D. 491/498. Such coins may have been legal tender after the monetary reform, but they have been issued in all probability before A.D. 512/517.

Conclusions

First, a few new bronze coins have been added to the list of late Roman Antiochene issues of the 5th century.

Secondly, there can be no doubt that there was a continuous bronze coinage at Antioch in the period A.D. 425-498. It might be that careful studies would reveal a similar continuation for other mints likewise considered to be closed by Leo I.

Thirdly, the list of late Roman Antiochene bronze coins presented here is not complete. In a forthcoming publication, J.P.C. Kent (personal communication) will describe bronze coins of Marcianus on which the S of the monogram is replaced by a Z or a H.

¹⁰ MIB p. 37.

Aspetti numismatici e stratigrafici a Roma tra tardo antico e medioevo : una sintesi sui dati della Crypta Balbi a Roma

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Con questa relazione si presenta una sintesi dei risultati raggiunti nello studio delle monete dello scavo della *Crypta Balbi* a Roma e dell'analisi che sto conducendo sulle fonti documentarie.

La superficie interessata dallo scavo corrisponde al complesso porticato e all'edera annessi al teatro di Balbo.

L'area, che occupa un settore dell'antico Campo Marzio meridionale, presenta una stratificazione ininterrotta e complessa, articolata anche attraverso insediamenti di età medievale e rinascimentale.

Sono state, infatti, distinte 4 principali fasi di occupazione del sito :

1. la fase di età repubblicana, precedente alla costruzione del monumento di Balbo;
2. la fase di età imperiale, che ha inizio con l'erezione del Teatro e della Crypta di Balbo (13 a.C.) e si conclude con l'abbandono di quelle strutture e l'inizio della loro rovina (V sec. d.C.);
3. la lunga fase medievale che vede la trasformazione del monumento in una struttura fortificata, nota dalle fonti come *Castrum aureum*, con l'inserimento di chiese e in seguito di strutture produttive e abitative;
4. la fase di grande ristrutturazione urbanistica con la demolizione delle strutture medievali e l'erezione del Conservatorio e della Chiesa di S. Caterina della Rosa (XVI-XX sec.).

L'area di scavo è stata suddivisa in diversi saggi, ciascuno dei quali ha richiesto proprie modalità di intervento dovendo tenere conto dei caratteri della stratificazione (Fig. 1).

Anche l'elaborazione dei dati di scavo è a stadi diversi. Alcuni saggi sono già stati parzialmente pubblicati in una serie di monografie¹. Di alcuni è in corso la pubblicazione². Di altri ancora lo studio dei materiali non è ancora avviato.

Per quanto riguarda le monete, la situazione è analoga. È stata fatta una prima indagine per prendere conoscenza della consistenza del materiale nel suo complesso, ma lo studio è concluso od avanzato solo per le monete di alcuni saggi³.

Ancora una precisazione va data riguardo alla tecnica di scavo. La maggior parte degli esemplari è venuta alla luce durante il normale lavoro a *trowel*, ma in alcuni casi la natura del deposito archeologico ha reso necessarie diverse tecniche di intervento che hanno avuto ovvie ripercussioni sulla quantità dei ritrovamenti. Cito ad esempio due casi limite. Lo scavo dei livelli pertinenti alla vita del giardino del Conservatorio di Santa Caterina della Rosa ha restituito solo 40 monete in un volume di c. 1000 mc, ed è indubbio che la scarsità dei ritrovamenti sia anche conseguenza dell'impiego dei mezzi meccanici usati per asportare alcuni potenti strati di macerie. Nell'area dell'edera, invece non è mai stato fatto ricorso all'escavatore ed in alcuni, peraltro limitati, casi le terre sono state setacciate. In questa area, dallo scavo di c. 800 mc. di terra, provengono 212 reperti numismatici tra monete, tessere e gettoni.

* Roma.

1 *Crypta Balbi*, 1; *Crypta Balbi*, 2; *Crypta Balbi*, 3; *Crypta Balbi*, 4; *Crypta Balbi*, 5.

2 *Crypta Balbi*, 6.

3 Si vedano i contributi di A. ROVELLI nei volumi citati alla nota 1.

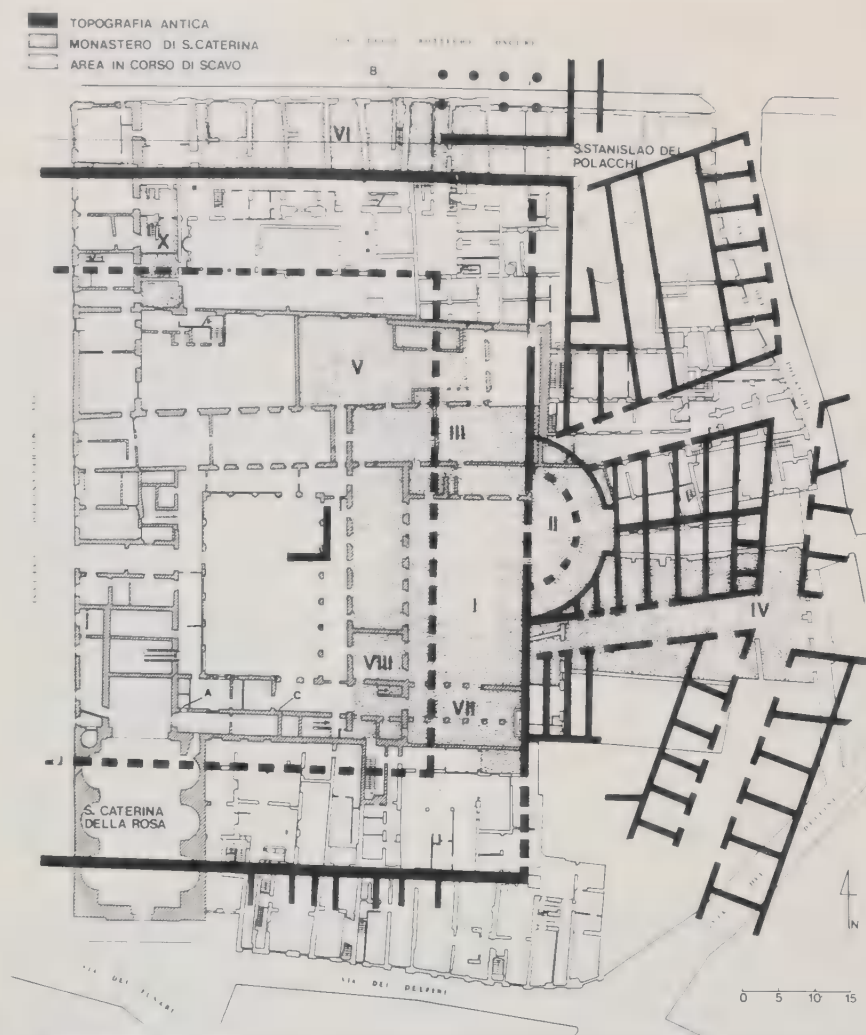


Fig. 1. Planimetria dell'area di scavo. I numeri romani indicano i diversi saggi archeologici (da Crypta Balbi, 3, p. 10).

In totale, le monete recuperate nei vari settori sono c. 1000 e coprono l'intero arco di tempo interessato dall'occupazione dell'area. Tuttavia, se per alcuni periodi gli esemplari sono numerosi, per altri si riscontrano vuoti significativi.

Innanzitutto si nota un «vuoto» nella documentazione numismatica per le monete della fine dell'età repubblicana e dell'alto e medio impero.

Ad esempio, dal saggio VI, che ha restituito una stratigrafia ininterrotta fino all'età repubblicana, su un totale di c. 190 monete, si contano solo 10 esemplari emessi tra l'82 a.C. e Costantino :

| Autorità | Nominale | Cronologia degli strati |
|-------------------|-------------------|-------------------------|
| L. CENSORINVS | denario suberato | età augustea |
| TIBERIO | asse | XX sec. |
| DOMIZIANO | quadrante | 80-90 d.C. |
| TRAIANO | quadrante | metà II sec. |
| SEVERO ALESSANDRO | denario | fine III-inizi IV sec. |
| CLAUDIO GOTICO | antoniniano | fine III-inizi IV sec. |
| AURELIANO | antoniniano | fine III-inizi IV sec. |
| COSTANTINO | fraz. di follis | 475-500 |
| COSTANTINO | 1/2 centenionalis | fine IV - inizi V sec. |
| COSTANTINO | 1/2 centenionalis | 1000-1100 |

È importante sottolineare i casi in cui le monete provengono da strati molto più recenti della data di emissione della moneta stessa.

Se prendiamo in considerazione altri settori, ad esempio il saggio I, la situazione si presenta molto simile⁴:

| Autorità | Nominale | Cronologia degli strati |
|--------------|-----------|-------------------------|
| CALIGOLA | asse | XVII secolo |
| VESPASIANO | sesterzio | XX secolo |
| età antonina | asse | XVI secolo |
| AURELIANO | asse XIX | secolo |

In sintesi, rari sono i rinvenimenti di monete della piena età imperiale nei contesti coevi; mentre molte sono da considerarsi in deposizione secondaria.

Il panorama si capovolge a partire dalla metà del IV secolo di cui abbiamo un'ampia documentazione.

Piuttosto indicativa è la composizione di uno strato del saggio X costituito dal riempimento di un tombino. Il livello, dal punto vista stratigrafico, si data alla prima metà del V secolo.

Il nucleo è composto da 100 monete così classificabili:

| Tipo | n. esemplari |
|------------------------|--------------|
| FEL TEMP REPARATIO | 9 |
| SPES REPUBLICAE | 2 |
| SECVRITAS REIPUBLICAE | 15 |
| GLORIA ROMANORVM | 7 |
| Secolo IV, illeggibili | 42 |
| Secolo IV - inizi V | 13 |
| VRBS ROMA FELIX | 2 |
| Secolo V, illeggibili | 7 |
| Non identificabili | 3 |

Tra quelle identificabili, l'emissione più recente è dunque l'*Urbs Roma Felix*, ma tra le illeggibili alcuni esemplari dovrebbero datarsi al pieno V secolo. Questi sono individuabili dai tondelli piuttosto grossolani e pesanti con un peso anche superiore ad 1,5 g.

La più alta concentrazione è dunque data da tondelli di Æ 3 e Æ 4 molto consunti e praticamente illeggibili che, è ormai opinione diffusa, hanno avuto una prolungata circolazione.

Tra gli esemplari databili al V secolo, successivi al tipo *Urbs Roma Felix*, pochi sono quelli in qualche modo riconducibili ad una specifica emissione⁵.

A queste emissioni, mi riferisco nuovamente al saggio VI, seguono numerosi tondelli dal diametro inferiore ai 10 mm e con peso ridotto che cominciamo a trovare in stratigrafie non anteriori alla metà del V secolo. Queste monete sono ben rappresentate anche negli strati di VI e VII secolo, ma sono decisamente inferiori per quantità rispetto alle abbondanti emissioni della seconda metà del IV-inizi del V secolo.

Volendo dare una stima indicativa si può affermare che le monete emesse, grosso modo, tra Costanzo II e Onorio costituiscono il nucleo più rappresentato nell'insieme dei reperti numismatici della *Crypta Balbi*, e si ritrovano anche, di conseguenza, con la più alta frequenza tra i materiali residui.

⁴ Per i reperti del saggio II si rimanda a SAGUI-PAROLI, 1989, in particolare fig. 2; ROVELLI, 1989, p. 49-95 e ROVELLI, 1990, p. 169-184 dove il catalogo è ordinato secondo le attività stratigrafiche, per contesti, e non in sequenza cronologica.

⁵ Una situazione analoga è già stata verificata da R. Reece per i materiali conservati all'Antiquarium del Palatino; cfr REECE, 1985, p. 94. Per un quadro sulla circolazione a Roma tra IV e V secolo cfr anche BRENOT, 1987.

Il VI secolo ha viceversa una presenza di emissioni più rarefatta, anche se si verifica una certa ripresa con Giustiniano I. Non si sono rinvenuti esemplari di età gotica, ad eccezione di un *follis* contromarcato XLII nummi su esemplare di Claudio. Per quanto riguarda i Vandali, abbiamo una esigua ma significativa presenza di emissioni nord-africane date da due nummi con la Vittoria⁶.

Anche gli esemplari bizantini sono scarsi. Fanno eccezione le monete provenienti dal saggio II, tra cui si contano 34 esemplari da XXX nummi della zecca di Roma⁷.

Un'ulteriore, sensibile diminuzione di rinvenimenti si riscontra per le emissioni successive alla riforma carolingia che introduce anche nel Regno italico il denaro argenteo. Tra le oltre 1000 monete dello scavo, per il periodo compreso tra il 781 e la metà circa del XII secolo, si contano complessivamente 7 monete.

La situazione inizia a cambiare con le emissioni di monete già ampiamente svalutate della seconda metà del XII secolo e muta ancor più radicalmente con le abbondanti coniazioni del XIII-XIV secolo, la cui presenza negli strati può essere paragonata a quella delle emissioni di IV-V secolo.

È opportuno ora tentare di leggere questo sommario elenco dei rinvenimenti sulla falsa riga di quanto traspare dall'indagine sui contesti di provenienza. Solo così è possibile dare una corretta lettura alle cesure o impennate percepibili nella documentazione archeologica e numismatica⁸.

Mi interessa, in particolare, affrontare due aspetti metodologici strettamente connessi :

1. il rapporto tra i reperti numismatici e la vicenda storica del sito esplorato;
2. il rapporto tra depositi di monete e volume delle emissioni. Esplicito alcuni casi.

Abbiamo, ad esempio, constatato la penuria di rinvenimenti di monete risalenti alla tarda età repubblicana ed alla prima e media età imperiale. Tuttavia, la scarsità di ritrovamenti, per questo periodo, investe tutte le classi di materiali ceramici : sigillate italiche, sud galliche, orientali, a pareti sottili, così come limitate sono le anfore di questa fase cronologica. Il vuoto di documentazione ha una ovvia spiegazione, ed è infatti legato alla continua manutenzione svolta durante il periodo di vita del monumento. Considerata la storia del sito, si può dunque affermare che le monete recuperate non sono significative per uno studio sulla circolazione a Roma nel periodo in questione.

Viceversa, abbiamo osservato una consistente presenza di monete databili alla seconda metà del IV e agli inizi del V secolo.

L'incremento del volume del circolante tardo antico è noto a tutti e questo ovviamente si riflette nella quantità dei ritrovamenti. Tuttavia, voglio sottolineare, in analogia a quanto osservato nel caso precedente, che questa ricchezza di ritrovamenti numismatici ha un riscontro preciso nel volume dei rinvenimenti delle altre classi di materiali, soprattutto della ceramica come, ad esempio, la sigillata africana D e, in particolare, le anfore. Una grande quantità di ceramiche e di monete di età tardo antica caratterizza i livelli di rioccupazione del monumento dopo il suo abbandono o comunque dopo la cessazione delle sue funzioni originarie. L'inizio della fase di abbandono, individuabile stratigraficamente con strati di accumulo di terreno, si colloca nei decenni finali del IV secolo, in concomitanza con una serie di alluvioni che colpirono la città. Da allora, nel monumento di Balbo si depositarono scarichi, rifiuti e macerie. In un certo senso, in questo caso possiamo quasi parlare di concentrazione di materiali da cui,

6 Riguardo alla circolazione del numerario di Goti e Vandali in Italia si rimanda a CRACCO RUGGINI, 1984, p. 44-55; ARSLAN, 1988, p. 226-236 ed alla bibliografia ivi citata.

7 ROVELLI, 1989, p. 50-65 e 77-85 per gli esemplari bizantini rinvenuti nel saggio II.

8 Per quanto riguarda i processi di stratificazione archeologica e la necessità di una conoscenza del contesto per una corretta interpretazione dei materiali, cfr CLARKE, 1977 e CARVER, 1990 con ampia bibliografia; per i problemi connessi alla valutazione dei reperti numismatici, si rimanda a CASEY-REECE, 1974 e CLARKE-SCHIA, 1989; in particolare, per Roma cfr i contributi in *La moneta nei contesti archeologici*

probabilmente, risulta un quadro «gonfiato» rispetto ad un normale rapporto tra volume del circolante ed esemplari persi.

La storia del monumento ha, dunque, nuovamente influenzato i processi selettivi che subisce ogni manufatto dal momento in cui esce dal contesto dei beni circolanti.

Del tutto diversa è l'interpretazione che si può suggerire riguardo alla rarità delle monete carolingie rinvenute. In questa circostanza, diversamente dalle due precedenti, la consistenza dei rinvenimenti ceramici ha una incidenza ben diversa rispetto a quella numismatica: agli oltre 20.000 frammenti di ceramica databili tra il IX e il X secolo, provenienti dall'essedra, fanno riscontro solo 5 esemplari coevi. La scarsità di rinvenimenti monetali, in un contesto che ha invece restituito una notevole quantità di ceramica, sembra dunque riflettere una reale penuria di circolante. L'incongruenza tra i valori quantitativi delle due classi di materiali rappresenta in effetti, nel nostro contesto, un'anomalia. Il grafico della fig. 2 mostra, ad esempio, l'andamento coincidente dei reperti ceramici e numismatici, di età medievale, dall'area dell'essedra, in stratigrafie comprese tra l'XI e il XV secolo (periodi I-X).

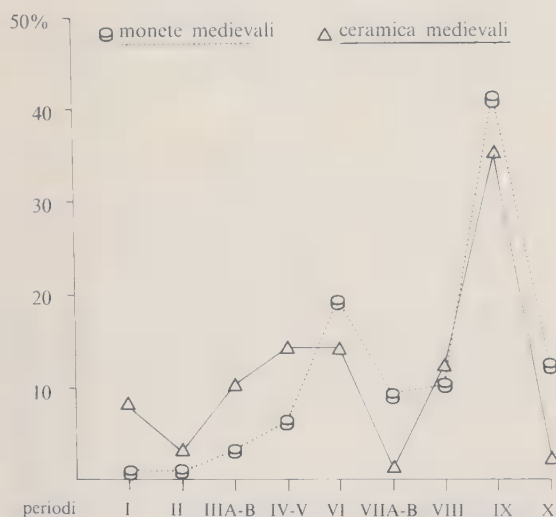


Fig. 2. Valori percentuali dei reperti numismatici e della ceramica di età medievale, secc. XI-XV, periodi I-X (da *Crypta Balbi*, 5, p. 190).

In ultimo vorrei affrontare un aspetto più propriamente storico connesso al significato economico che si vuole attribuire alle monete presenti in strati di cronologia molto posteriore.

Si tratta quindi di analizzare il problema della durata di circolazione di una moneta e quello connesso della residualità. Riguardo questo secondo aspetto, abbiamo già sottolineato l'alto tasso di residualità che può caratterizzare il reperto numismatico. Gli esempi dati sopra sono piuttosto indicativi.

Nei siti pluristratificati, la residualità è un fenomeno che interessa tutti i materiali⁹. Tuttavia, per le monete, più facilmente che per le alte classi di reperti, è spesso difficile accertare il limite tra residualità e, viceversa, lunga circolazione.

Un esempio noto è quello di Cartagine dove si è supposto che le emissioni della seconda metà del IV secolo abbiano circolato per circa 200 anni, se non oltre¹⁰. Per Gerasa, una situazione simile è stata brillantemente suggerita al convegno di Ravello del

⁹ Sulla consistenza del materiale residuo nei contesti studiati del nostro scavo, cfr *Crypta Balbi*, 3, p. 59-60 e 167-170; *Crypta Balbi*, 4, p. 8; *Crypta Balbi*, 5, p. 201-202.

¹⁰ REECE, 1984, p. 172-173. Per i problemi inerenti al fenomeno della residualità ed alle connessioni con la stratigrafia del sito cfr HUMPHREY, 1978, p. 164-168 e HITCHNER, 1980, p. 263-270.

settembre scorso¹¹. Invece, per Roma e l'Italia in genere, R. Reece ha ricordato che, al momento, non ci sono elementi sufficienti per accertare una analoga durata di circolazione del numerario tardo antico¹².

I materiali della Crypta Balbi, e la qualità stessa degli strati evidenziano quanto il problema sia acuto. Prendo ad esempio il saggio VI, dove la sequenza stratigrafica è nota fino al periodo repubblicano.

In questo settore, gli strati da cui provengono le monete costituiscono diversi livelli pavimentali di una strada che ha subito vari rialzamenti tramite il riporto di terre ricche di materiali residui di epoca imperiale (ceramica, laterizi, malta ecc.). La ceramica datante in associazione presenta, a sua volta, un indice molto alto di tipi genericamente databili tra il V e VII secolo (ad esempio le coppe con orlo a mandorla di forma Hayes 99 o i vasi a listello del tipo Hayes 91, questi ultimi con una cronologia compresa tra metà IV-VII secolo).

L'indeterminabilità dei materiali ha fatto sì che nella definizione della cronologia assoluta sia stata spesso più significativa la posizione degli strati nella colonna stratigrafica che non la cronologia dei materiali.

Data l'ambiguità del contesto archeologico ci è dunque difficile interpretare con sicurezza la presenza del numerario tardo imperiale in questi strati posteriori.

Tuttavia, pur tenendo presente queste difficoltà possiamo proporre alcune soluzioni che hanno soprattutto il valore di ipotesi di lavoro.

Si è detto che, probabilmente, a Cartagine e a Gerasa il numerario tardo imperiale circolò con quello bizantino di volume certamente più ridotto.

Per Roma, gli studi di Reece sui materiali conservati all'Antiquarium del Palatino hanno evidenziato una scarsa quantità di monete bizantine¹³.

I dati provenienti dal nostro scavo sembrano concordare con questa osservazione del Reece, per quanto la nostra valutazione sia da considerarsi provvisoria. Dobbiamo infatti tenere conto che, attualmente, solo nel II e VI saggio si sono raggiunte stratigrafie pertinenti all'età bizantina. La nostra ipotesi si fonda quindi soprattutto sulla scarsa incidenza delle monete bizantine sul complesso dei materiali rinvenuti essendo stato invece accertato che nel caso di emissioni abbondanti, come quelle del IV-V secolo o del XIII-XIV, il tasso di presenza negli strati o, eventualmente, di residualità, è alto.

Supponendo una situazione di penuria di circolante, determinata da una contrazione di emissioni, è possibile immaginare, come per Gerasa e Cartagine, che l'omogeneità tra i tondelli di bronzo tardo romani e bizantini abbia favorito la lunga circolazione dei primi data la probabile insufficienza dei secondi.

Rimangono comunque da circoscrivere la consistenza della ipotizzata lunga circolazione e la durata del fenomeno. Questa valutazione non potrà, ovviamente, prescindere dall'analisi del contesto economico. Il riutilizzo del numerario romano dovrebbe, in ogni caso, rinviare ad una economia che, pur con evidenti difficoltà, continuava a mantenere in vita e ad avere bisogno di una circolazione trimetallica.

Viceversa, non è detto che questo tipo di interpretazione sia adeguata anche per i secoli centrali del medioevo nonostante la moneta romana continui a reperirsi in buona misura negli strati di quell'epoca, come del resto in quelli ancora più recenti.

In un precedente studio, tramite il confronto con la ceramica romana residua nei contesti di pieno medioevo, corrispondente grosso modo ad 1/3-1/4 di quella coeva, avevamo sottolineato l'inopportunità di procedere alla troppo facile equazione monete romane in strati medievali = circolazione di monete romane nel Medio Evo. Il rapporto direttamente proporzionale tra la grande quantità di ceramica romana, certamente residua, che accompagnava quella medievale, e la quantità di monete romane trovate in associazione (Fig. 3), ci ha portato a pensare che il comportamento delle due classi di materiali possa essere analogo e che quindi anche la presenza di monete romane possa

¹¹ MARTIN-BUENO-MAROT SALSAS, c.s.

¹² REECE, 1985, p. 93-95.

¹³ REECE, 1982, p. 132.

essere ricondotto ad un fenomeno di residualità. Le monete romane sarebbero, in questo caso, da considerarsi estranee al contesto e quindi in seconda giacitura¹⁴.

Del resto, il sistema monetario ed economico era ormai radicalmente mutato anche se sulla sua esatta definizione i pareri sono tuttora diversi.

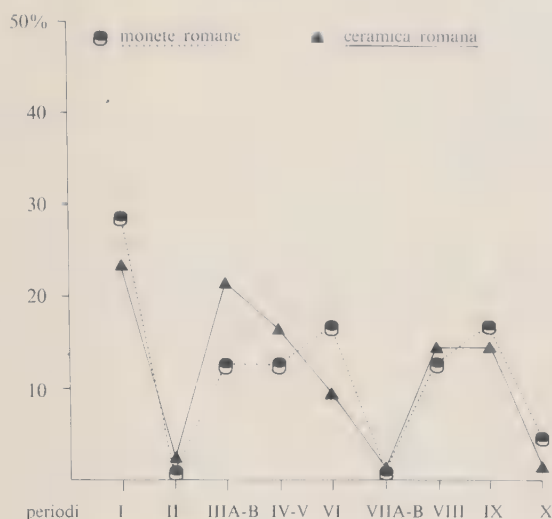


Fig. 3. Valori percentuali delle monete e della ceramica di età romana negli strati medievali, secc. XI-XV, periodi I-X (da Crypta Balbi, 5, p. 188).

In sintesi :

per le monete tardo-imperiali negli strati di età bizantina, pur nell'impossibilità di mettere in rapporto la residualità delle monete con quella delle altre classi di materiali, di incerta datazione, si può proporre una continuità d'uso come moneta circolante :

1. per analogia con il caso di altri importanti centri urbani del Mediterraneo come Cartagine e Gerasa

2. per la scarsità delle emissioni bizantine

3. per la coerenza delle monete romane col sistema monetario bizantino che si mantiene trimetallico e che, a Roma, conia esemplari in bronzo fino a circa la metà dell'VIII secolo.

Per le monete romane negli strati medievali si suppone, invece, una loro esclusione dalla circolazione dovendo tenere conto :

1. della notevole presenza, negli strati, di materiali romani residui, certamente non in uso, la cui quantità appare direttamente proporzionale a quella delle monete romane.

2. del mutato sistema monetario diventato ormai monometallico.

È evidente che nessuna delle condizioni elencate può essere, di per sé, esaustiva per accertare la residualità o circolazione di una moneta, ma la convergenza di più elementi può essere un forte indicatore dell'una o dell'altra condizione.

Per concludere, sono portata a ritenere che la moneta romana presente negli strati di periodo bizantino poteva avere ancora una funzione economica che, probabilmente, successivamente perde.

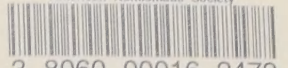
La presenza di una moneta in uno strato è solo, in effetti, una condizione necessaria, ma non sufficiente, a dimostrarne la circolazione nel momento di vita dello strato. Per quanto riguarda il medioevo, è comunque impressionante il divario che si riscontra tra il dato archeologico e quello documentario. Basta infatti scorrere i cartari dei possessori monastici (ad esempio il Regesto di Farfa, secoli VIII-XI) per ricavarne l'impressione di una imponente massa di circolante che finora non trova riscontro negli scavi archeologici.

¹⁴ Cfr la bibliografia citata alla nota 4.

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